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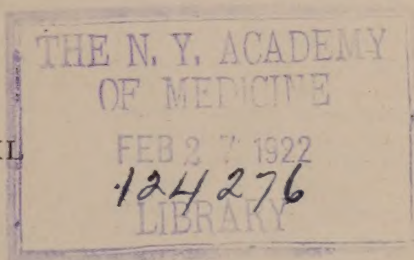
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July to December, 1921

This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the names of papers read, officers elected, etc., can

be located in the proceedings under Societies. Editorials, News of the State, Marriages, Deaths, Public Health items are classified under these headings. The subjects of editorials also appear alphabetically and are marked (E).

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PERSONAL EXPERIENCE WITH STATE MEDICINE IN GERMANY.*

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CHICAGO.

Ladies: What Dr. Edward H. Ochsner, my friend and collaborator in this field, has been endeavoring to impress you with I want to drive home by showing you what comes of the efforts of the State Socialist when those efforts are successful in the direction against which Dr. Ochsner has been warning you.

When I was doing post-graduate work in Europe I had heard a great deal about State Insurance and State Medicine, and I saw a great many of the phases of State Insurance in the clinic. I was very anxious to find out how it would affect the practice of medicine. So one day I saw a notice asking for a young physician to take a doctor's practice while he was away on his vacation. I applied for the position for a month. I wanted to find out what it looked like in reality.

That doctor was practicing in the southeast part of Berlin, which was mostly inhabited by people who worked in factories, and who were, therefore, subject to the law of Germany at that time which made a man (or a woman) join that insurance organization whether he wanted to or not. The workingman and woman contributed a certain small share of their wages (the control was carried out by stamps which were pasted in a book regularly, showing that their share had been paid). The employer had to pay the bigger part of the insurance and the state paid a small balance. All the working people belonged to it. Since then we know that Socialism has become more powerful and the class of people who are insured, whether they wish to be or not, has reached up to about the wealthiest persons in the

country. Where formerly only a workingman had to join that insurance organization, now people with incomes of 20,000 marks and over are obliged to join, which, of course, has created a great deal of dissatisfaction.

In the practice of this physician I became acquainted with the workingman and how he is treated. The doctor had a reasonably decent home on the second floor of a tenement building which had five stories. Behind the front building was a court; back of the court was a rear building. Back of the building in the rear was another court and then came another building; and in some parts of that neighborhood there were four buildings separated by courts sufficiently large to admit the officially prescribed amount of light and air. They were not any too lavish with their light and air, and a good many of those homes were rather mouldy and moist and not very light. But the staircases and the courts were duly inspected by the police and you could not ever see any such accumulation of filth and dirt as you see, for instance, in Chicago.

The alleys did not exist in the condition in which they exist in Chicago; that was not possible. The people who lived in those homes were limited as to the number of persons permitted for a certain amount of air space. The state looked after that, also. You could not take in ten roomers in a two-room apartment, as I understand has been done in Chicago. So as far as the public supervision was concerned, there were certain decided advantages, but as far as the medical practice was concerned there was no supervision; and how did that look?

When I became acquainted with the doctor he showed me the office, which was the living room of the family; the best room of the family served as waiting room. There was a little hall (dark as most halls in Berlin), where a man admitted the patients. There were office hours in the morning from eight to ten, and often we had to start at seven in order to get through. After

*Read before the Woman's City Club of Chicago, April 12, 1921.

ten the calls were made at the homes. In the afternoon from two to four there were office hours, and then more calls, and in the evening from eight o'clock on office hours again.

I had to see between 30 and 40 patients from eight to ten. If I saw 30 patients in 20 minutes that gave each patient exactly four minutes. Figure it any way you want. You might give one ten minutes, then you can't give the next one four. Now maybe some of you have consulted physicians who made a thorough examination and you probably remember that it took more than four minutes. How closely could those patients be examined? They could not be examined. There was a very ingenious arrangement by which the doctor took care of that practice. In front of him on the desk was a set of pigeon holes with prescriptions in them. Mrs. Doctor used to write those prescriptions while he was out making calls. These prescriptions were ready—stacks of them. When the man came in at the door he was asked, "What is the matter?" He would say he had a cough. The doctor reached in and pulled out a prescription for cough, "Here, a teaspoonful three times a day. Next."

The next one had a headache. "Powder, twice a day, morning and evening. Come back tomorrow." That is the way it was done—not only in that office but in every office of the doctors working under the Health Insurance office. I watched him for a few days before he left, as I wanted to learn the tricks, and I said, "How do you manage with the people who have some real trouble, not simply a fancy headache or a little bit of a cough that doesn't matter?" "Oh," he said, "that is very simple; they come back. The others get one prescription; they are all right. Maybe they come back for another prescription after two or three days. Most of them get well, anyway. They would not come if it cost them something. They only come because it doesn't cost anything."

"Well, what about the man's working efficiency?" "Oh, well, they have to pay him while he is not working, therefore, he lays off as long as he can. As long as he has a prescription from the doctor he is sick and he lays off two or three or four days of a week. That insurance

pays for it; not only buys his medicine, but pays him a part of his wages."

"Now, what do you do with the man who is really sick?" "I put him aside and when I am through with the mob I take that man in the corner and look him over." I watched him to see how many he looked over. He had just exactly one to look over. That man was sick enough, to be certain.

The next was: "How do you make your calls; how many calls do you have to make?" "Oh, I make ten or fifteen calls in the morning, twenty calls in the afternoon." "Take a cab?" "No, you can't take a cab. Those people are all social democrats. If you arrive in a cab they call you a plutocrat, and won't have anything to do with you. You walk." So to get around in Berlin from the doctor's office I took a car for the farthest call, as far away as I had to go that day, and then walked back towards the office, making all calls in that direction, and did that in various directions, and every time I came to the office I picked up some more calls.

"How do you do at the homes?" "Same thing. Give them a prescription, that is all they want." "Well, now, if they are really sick, what do you do?" "Well, send them to the hospital; don't bother with them, it doesn't pay." "It doesn't pay, that was the most important thing."

Well, I saw 30 people in the office in the morning. I saw 10 or 15 at calls in the morning. I saw 10 or maybe more in the afternoon. I made 15 to 20 calls in the evening and I had to see 20 to 30 again in the office in the evening. I was so dead tired when I was through that I could not even read a newspaper, and as for reading up on interesting cases it was utterly out of the question.

I said to the man, "How can you live that way? You are nothing but a slave. You might just as well sell pants or nail boxes. There is no more intellectual effort to this kind of business than there is to the most ordinary working man's life." "Well," he said, "I know it. I am going down. I haven't any brains any more. I haven't the energy any more to read anything. I haven't the time to go to a medical meeting because if I go I lose my calls; if I lose my calls, I don't make a living."

I began to get interested in how much he made and I found out. For an office call, six

and a quarter cents (pre-war exchange, not present exchange). That was long before the war. For a call at the residence, 12½ cents. Do you wonder now he had to make 30 examinations in the office? Thirty times 6 cents is \$1.80. What kind of service did he give those patients? Was that service worth any more than six cents? Did the patient get what he paid for? He paid nothing and he got nothing.

The next thing, of course, we as ladies are interested particularly in what happened to the women. It is easy to enlist all your sympathies in that direction, and it is proper it should be so. You are interested in maternity. When the baby comes every woman is ready to help with the last possession she has. So in every city where they want to enlist the Woman's Club they begin with the talk about maternity. What is the poor woman going to do, who has to go to a hospital, whose husband has left her or has died, and here comes that hour—that dreaded hour? She can't help herself; she has got to have help. Won't you help? Of course, you will help. It is perfectly right, and haven't you done so before? Haven't you helped yesterday and the day before? Are there no institutions in this country where a woman can have help and food and nursing during that time of maternity? Have you forgotten that every hospital has a maternity department? Have you forgotten that there are hospitals for nothing but that?

Now let us see how it is done when the state does it. I saw it in that doctor's practice. His confinement cases paid him richly. They paid much more than 12½ cents. They paid 36 cents a call. So the consequence was that he divided that confinement into as many calls as possible. He had one patient waiting for confinement who had had a monster the year before, in whom a large amount of fluid had accumulated during this pregnancy again, so that he had reason to suspect that that baby was to be another monster or that something was going to be wrong. And so he warned me that this was to be an unusual confinement, and a rather dangerous one possibly, and that I should keep close track. I said, "All right, I will stay right there." "No, you won't," he said. "You stay there when you are called if anything has to be done. If nothing

is to be done, you go right home and wait until they call you again." As it happened when I got there the woman had to have immediate help; the woman had to be delivered artificially; after the baby was born I had to go home and wait for the rest of that confinement so that I would be called up to take care of the after birth. That made two obstetrical calls. She only lived a block from the doctor's office. I saw there was not anything much going to happen or I would not have gone away even for 36 cents.

That is the way it was done. At that, that doctor made an income of 15,000 marks; that was, in those days, less than \$4,000—something between three and four thousand dollars—which was a good income for a Berlin doctor.

Let me tell you I saw that doctor again four years afterward. He was just coming back from a sanitarium where he had been six months for a nervous breakdown. Two years afterwards he was dead. He was only one of many men; and the profession in that country, not only in Berlin but all over that country, has been brought to the verge of a condition where they refuse to work, and they go on strike. I do not know whether you have read in the daily papers that at times there have been actual strikes, the doctors would go out on strike—a thing we do not hear of here. The doctors refused to make any calls, emergency or not. Of course if we do anything like that here we will not do it that way. You know all our government officials are honest, efficient (laughter) and do all they have to do, so it is perfectly safe to introduce that method here, now isn't it?

What shall we do? We do not refuse that woman in confinement. She gets what help or aid or nursing she needs. Do we need more of it? The more of it we have the better. A great many women are confined in homes where conditions are unfavorable. It would be much better if the doctor could take care of his patient in a good, well-conducted hospital. All right, if you want to help, why don't you help those hospitals that do that work? Would you rather give it to the state to spend on a large official family of people who warm chairs in offices and keep statistics? Or would you rather give it to a hospital where it will do the most direct good? Which is more efficient, state administration or

private administration? Ask your business man; ask your husband if he is a business man, who can conduct his business better—can he do it better, cheaper, more efficiently or would he rather have Mayor Thompson do it?

A hospital is a business like every other business, and the better it is conducted the better care it will give; but the one person that puts the stamp on the hospital is not the Board of Trustees, it is not the Directors, it is not the nurses, it is not the social worker. It is the doctor who does the work. You can have a first-class hospital and have a fine man run it; have him die and put another man in his place who is not a fine man; he has the same machinery and the same Board of Trustees and the same nurses, and the same amount of money, but it's all up; it's a failure.

Every patient's ailment is that patient's ailment. The man who knows that patient is the doctor for that patient. You can put big charts down with curves and figures and dates and record what the patient's temperature was on the 17th of September, 1902, and all that, but the doctor who has known that patient has examined him properly and carefully and is acquainted with his ailment knows infinitely more than can be put on any chart. It is claimed you don't have to have the individual doctors; all you have to do is keep a record of the patient; he has the record and he goes from doctor to doctor where the insurance company or lodge sends him with this chart. How would you like it for yourself? Every patient's ailment is his own ailment. There may be a good many like his, but his is his own, and he wants to be treated the way he is, not the way that is good for Smith or Jones. If you want to have your medical system under state health direction and want to put your patient on the chart and let him be a number and give him all the efficiency that state health direction will give, do it. If you have learned better, then go and help the existing hospitals so that they can do it. They can do much more individual work and they can do it to much greater benefit for all those patients.

The profession in the countries where they have the state system, such as Austria, Germany, England, is fighting it tooth and nail. The profession here will fight it tooth and nail because

they see nothing but their degradation from one of the noble professions to a no-account, mechanical, hopeless laborer.

JEJUNAL DIVERTICULA*

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Diverticula of the jejunum are the least frequent diverticula of any portion of the gastrointestinal tract but they are by no means the least important. Our physiologists teach us that next to the contents of the duodenum those of the jejunum are the most toxic of the gastrointestinal tract. The foodstuffs partly broken up in preparation for absorption or excretion are here quite toxic and if they are delayed in their passage, an undue amount of the toxins gain entrance to the circulation. Furthermore, if delayed too long in this region, certain processes are carried too far and other toxins are formed which would be prevented by the normal action of the intestinal juices. This being the case, it is important that an early correction of developing stasis, from whatsoever cause, be instituted. An examination of the histories of cases of jejunal diverticula that have been published indicates that a stasis is present and that very toxic by-products are just as surely being absorbed and affecting the system. We have our evidences of this in the histories of three cases with an anaphylaxus in each. One had a chronic bronchitis, one a hypostasis, and another died of pneumonia. In my case there were repeated attacks of bronchitis, each coincident with the acute intestinal stasis and toxemia.

A search of the literature has revealed only twenty-five cases of diverticula of the jejunum, including a case of my own. The following table indicates the points of importance in each:

Some of these also have diverticula in the duodenum, others in the ileum and others in the colon. Because of these complications the toxemia of the jejunal stasis cannot readily be wholly separated from that of the remainder of the bowel. A review of these twenty-five cases reveals some points that are interesting and should be provocative of more careful study of

*Read at the 71st Annual Meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

Physician	Case and Year	Sex	Age	Type	Etiology	Location	Number and Size	Time of Diagnosis	Symptoms	Result or Termination
Cooper, Sir Astley.....	(1) 1844	M	50	False	Pulsion along with obstruction due to adhesions.	Mesenteric border	Multiple Pea to walnut.	Autopsy	.....	Died of general dropsy. Lungs and abdomen filled.
Corallion.....	(2) 1869	F	30	.....	.....	Mesenteric border	Single	Autopsy	.....	Died following placenta previa.
Oster, Sir William.....	(3) 1881	M	65	False	Weakened blood vessel openings	Mesenteric border Blood vessels coarsened over them.	Multiple (53) Cherry to apple.	Autopsy	Acute enteric attack with melena. Suffered for years with rumbling especially after meals. No constipation but for years had colicky pains.	Death, but no connection between this and the diverticula.
Moore, N.....	(4) 1882	M	40	True	A congenital stricture in the mucous membrane at the beginning of the jejunum.	Mesenteric border In first three feet of bowel.	Multiple	Necropsy	None	Died of Bronchitis
Buzzi.....	(5) 1885	M	77	True Speaks of it as mis-placed Meckel's.	(Congenital Malformation)	Mesenteric side	Single 23 x 32 mm.	Necropsy	.....	Peritonitis following perforation of a carcinoma of the pylorus.
Buchwald & Janicke.....	(6) 1887	M	6	True	Congenital development.	Mesenteric border	.....	At operation	Obstruction of bowels due to cystic tumor of jejunum.	.....
Virchow.....	(7) 1890	M	Lean old man.	False	.....	Mesenteric border	Multiple The size of an egg.	Necropsy	.....	.....
Edel, M.....	(8) 1894	F	73	False	Lack of perivascular support.	Mesenteric border With blood vessels.	Multiple Hazelnut to apple.	Necropsy	.....	Had complications of peri-cardial effusion. Hypostasis in lungs. Arteriosclerosis. Nephritis. Diverticula of colon also present.
Seippel.....	(9) 1895	.....	.....	False	.....	Mesenteric border	Multiple Walnut size	Autopsy	.....	Intestine wide and flabby. Mesentery full of fat.—Death.
Good.....	(10) 1895	F	77	False	Lack of perivascular fibrosis.	Between layers of the mesentery along with vessel in one case.	Multiple	Necropsy	.....	Intestine wide and flabby.—Death.
Hausemann D.....	(11) 1896	M	14	.....	Accessory pancreas in the apex.	Opposite mesentery.	Single	Necropsy	.....	.....
.....	(12) 1896	M	85	.....	Lack of perivascular fibrosis.	Mesenteric border	Multiple 400 in small bowel.	Autopsy	.....	Died of pneumonia.
Grassberger.....	(13) 1897	M	73	False	.....	Mesenteric border	Single (also 1 in the stomach, 2 in duodenum and many in colon.)	Necropsy	.....	Death due to perforation of duodenal ulcer.
Nichols A. G.....	(14) 1899	F	64	False	Chronic Bronchitis. Hernia 30 years. Spare build.	Mesenteric border	50 Pea to Walnut	Necropsy	.....	.....
Fischer, M. H.....	(15) 1900	.....	.....	False	.....	Mesenteric border	One Egg size	Museum specimen	.....	.....
Gordinier & Sampson.....	(16) 1906	F	45	False	Impaction of feces.	Mesenteric border A large vessel on each.	Multiple 13 in 40 cm.	At operation (No x-ray exam.)	Distension, pain and tenderness. Nausea and vomiting. 2 masses on palpation near the umbilicus.	At operation one was found infected and adherent. This was removed, obstruction relieved and patient got better.
Taylor & Lakin.....	(17) 1910	F	68	False	.....	Mesenteric border	Many—pea to walnut size. Many in colon.	Necropsy	No symptoms.	Died of pneumonia for which she entered hospital.

Physician	Case and Year	Sex	Age	Type	Etiology	Location	Number and Size	Time of Diagnosis	Symptoms	Result or Termination
Balfour	(18) 1913	M	62			Mesenteric border	Four. Walnut to hazelnut	At operation for pyloric ulcer and adhesions.	Gastric distress for 20 years indicating ulcer of duodenum.	Gastroenterostomy. Recovery with good results. Diverticula not disturbed.
Lataret & Murad	(19) 1914	F	50			Mesentery with blood vessels.	Single 2.5x5 cm. Large opening.			
Braithwaite	(20) 1918	M	45			Mesenteric border	Two in Duodenum	Necropsy		
Case, J. T.	(21) 1920	M	61			Mesenteric border	Multiple	At x-ray Examination	Indigestion for 10 months with distress and discomfort after meals relieved by belching. Last 6 mos. very hard to relieve. Occasional heart burn at night. No pain, nausea or vomiting.	At operation signs of inflammation found. Resected 36 cm. of jejunum. Recovery.
Case, J. T.	(22) 1920	M	73				25-30 in jejunum Upper ileum. (Multiple in colon).	At x-ray Examination.		Resection and recovery.
McWilliams	(23) 1920	M	71				Seven	Necropsy	Acute abdomen of 24 hours. Pain, tenderness, vomiting, tympany, distension in center and flat in flanks, pulse small, rapid and irregular. Temp. Normal.	Died of thrombosis of mesenteric artery. Also had two aneurisms of the aorta.
Terry & Mugler	(24) 1921	F	59			Mesenteric border	Five	At operation for duodenal ulcers.	Symptoms of obstruction at a later date due to enterolith in a diverticulum.	Operated, resection Recovery.
Mackechnie, H. N.	(25) 1921	F	43	False		Mesenteric border	13. Also one in second part of duodenum and two in third part of duodenum.	At operation for chronic intermittent ileus.	Toxemia from chronic intermittent ileus.	Inverted two and performed a duodeno-jejunostomy. Died six hours later.

our gastro-intestinal cases. The first case is one by Sir Astley Cooper¹ in 1844. This was an autopsy specimen. The succeeding four cases were autopsies, all of which appeared to have died of conditions other than the diverticula. In 1887 the first case was found in the live subject by Buchwald and Janicke⁶ when they operated for obstruction of bowel due to a cystic tumor. Following this nine other cases were found at autopsy, the patients having died of other conditions.

In 1906 Gordinier and Sampson¹⁶ operated on a case with symptoms resembling but atypical of acute appendicitis and found an inflamed diverticulum producing obstruction. Operation relieved the condition and the patient recovered. Case²¹, in 1920, was the first to report a case diagnosed during routine x-ray examination of the gastro-intestinal tract, and to confirm this diagnosis at operation. This he did in two cases.

Diverticula of the jejunum may be congenital or acquired. The congenital type has all of the intestinal coats—the mucosa, muscularis and serosa. There have been reported three³⁻⁵⁻¹¹ cases of such, one⁵ of which was spoken of as a displaced Meckel's. The acquired type has a normal serosa, an absent or a very much thinned out muscularis and a mucosa in which the height of the rugae is decreased. In other words, it presents itself as a hernia of the mucosa through the muscularis. This type must be distinguished from cysts of the intestinal wall which are composed of a simple serous covering and which have no connection with the intestinal canal.

Etiology. The true type. It is believed that like the true type of diverticula in other parts of the bowel those in the jejunum are congenital. This belief is rather confirmed by the finding of an accessory pancreas in the apex of one, and by finding a case in a boy at the early age of 6 years.

In the acquired type many factors appear to take part, varying with the individual case.

Age. It appears more frequently after middle life. Under 50 years there were 7 cases; between 50 and 85 years there were 16 cases, and in two the age was not mentioned.

Sex. Of the 25 cases, fourteen were males, nine were females, and in two the sex was not mentioned. The mode of living with heavy lift-

ing and straining incident to the labor of the male sex appears to have a bearing.

Location. Twenty-two cases were found along the mesenteric border with its decreased resisting power, with the weakness due to the entrance and exit of vessels (5 cases) and with a lack of fibrous support of these vessels.

Many other factors have been mentioned in individual cases chief of which are weak spots in the muscularis, cachexia following an obesity, fatty infiltration of the muscularis, adhesions producing traction, increased intra-intestinal tension, varying size of blood vessels and of tension in vessels due to chronic heart trouble, chronic cough as in bronchitis, developmental rests as in accessory pancreas or epithelial pearls. No one of these, or in fact any group of them, appear to fill the bill as causative factor in any particular group.

Pathology. In the true type there is nothing abnormal in the appearance of the diverticulum unless it should become inflamed, in which condition it would have an inflamed, swollen aspect with round celled infiltration which might proceed to occlusion of the opening, abscess formation, rupture, peritonitis and death.

In the acquired type we have a condition in which the intestine is dilated, the normal rugae are decreased in height, the muscularis is atrophied and sometimes absent except for a few fibers, the serosa is normal except for a stretching of the same. Acute inflammation may set in with round celled infiltration, and following this a gangrene, or an occlusion of the outlet with cystic or abscess formation. This may go on still further to an inactive stage with inspissation and sterilization, or in the opposite direction to rupture with general peritonitis.

One must say a word about the secondary pathology in which the absorption of the toxic material produces such a marked toxemia with its bilious attacks, its headaches, its alternating constipation and diarrhea, and finally such a burdening of the liver cells and kidneys that functioning decreases and the patient passes gradually to a chronic hepatitis and nephritis.

Symptoms. An examination of these cases shows that the chief complaint of these patients is a gastro-intestinal disturbance with indigestion, mild and prolonged; alternating constipation and diarrhea; bilious attacks, which should

be designated as toxic attacks—anorexia, nausea and vomiting; coated tongue, dry and white; pain, very mild and persisting but more or less indefinitely located; abdominal distension; muddy complexion; normal temperature, pulse slightly increased, weaker than normal; heart sounds weaker. The blood count will show some anemia depending on the duration and intensity of the toxemia. Blood pressure will be below normal. The urine may have some evidence of albumin and pus due to the prolonged irritation. There is a marked skatol and indol reaction and in the worst cases there is some indican.

Radiologic examination, if carefully made, will show the irregular mass of barium in the sac with the upper part of the sac filled with gas. If repeated it will show the residual barium decreasing in amount with each examination. This condition persists for some days.

The diagnosis is seldom possible without the x-ray but the condition must be kept in mind and carefully watched for in all chronic toxic gastro-intestinal cases. In cases where the complex is present and not previously diagnosed the condition must be carefully looked for at operation.

TREATMENT, MEDICAL AND SURGICAL

Medical. This must be recognized as purely palliative. It is to be used only in those cases in which a general anesthesia with a major operation are contraindicated, or where it is felt that the whole diverticula bearing area cannot be excised or removed. The chief desideratum is to decrease the toxemia. This must be done by a careful control of the mode of living, diet and excreta. These patients need a large amount of fresh air and sunshine with moderate, well regulated exercise of a nature that will tend to stimulate the musculature of the intestinal canal without leading to exhaustion. This exercise would be much better taken in the open air. The diet should be a low proteid one. The proteids lend themselves much more than do the carbohydrates and fats to a formation of the toxins in these cases. Meats, meat soups and eggs should be almost eliminated and the vegetable proteids substituted. Liquids, preferably water, should be taken to the amount of at least 50 ounces daily. The bowels should be kept open by the use of enemata in preference to laxatives. The skin

should be thoroughly cleansed and the pores kept open. The kidneys should be carefully watched and flushed with alkaline diuretics.

The acidity should be decreased by the use of alkalies.

Intestinal antiseptics are of little or no value. Roberts²⁶ has suggested in colon cases, the use of a barium enema. The action of this is to force out of the diverticula and bowel the fermenting material and to act as an antiseptic. If this is of value, as he says, we should expect the use of the barium meal to be of some value in upper intestinal diverticula.

Surgical Treatment. This consists in getting rid of the protrusions by the most effective means compatible with safety.

The simplest method and the one with least probability of complications is an inversion of the diverticulum into the bowel and insertion of two rows of suture transverse to the lumen of the bowel. Especial care must be exercised to bring the muscular layers in close apposition. The danger of this is that the inverted diverticulum is a focus for fecal impaction. The next method is to excise each diverticulum separately, suture the separate layers with sutures transverse to the longitudinal axis of the bowel. This method eliminates the danger of the previous one but adds another more serious one in the danger of infection from opening the bowel. Both of these methods are complicated by the fact that the diverticula are almost always on the mesenteric border, most frequently between the layers of the mesentery and in close apposition with the vessels. These things make an inversion not a simple matter and make an excision a fairly hazardous proceeding because of the difficulty of securing a perfect coaptation and union at the point not covered with mesentery.

The most satisfactory method as well as the most dangerous is an excision of the diverticulum bearing area of the bowel with an end to end anastomosis. This is often a hazardous operation because of the marked toxemia, the hyperacidity and the lowered vitality.

Following the operative procedure the causative factors must be corrected in order to prevent development of more diverticula.

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MENTAL RECONSTRUCTION.

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Present day educational problems, whether of the normal or subnormal, must be looked upon from the point of view of social needs and requirements. Grooves of traditional procedure are being abandoned and the major objectives are obtained from a study of social and humanitarian needs. Fundamental principles are established and scientific methods employed upon the basis of these needs.

The evolution of social conditions since the beginning of the present century is apparent in all phases and conditions of human life. Simple problems have grown complex and there is, therefore, a new order of requirements, a demand for adaptation to these more complex conditions, a challenge to the utmost exercise of co-ordinate effort for the resulting human interdependencies. The world has never known a time when response to the demands for social advances has been so prompt or when these advances have had such an impetus or have been so markedly progressive in their civilizing and humanizing influences; this, despite the general unrest characterizing a great portion of the last decade.

The need for reconstruction of physical manhood after the ravages of the recent war is associated not only with need for physical preparation and training of youth, which was found so sadly lacking in recruiting for army service, but

the revelations as to mental inefficiency have been made startlingly apparent. The demands upon society for a better procedure have awakened the social world to a realization of the past general remissness and a consciousness of responsibility, which is taking form in better and increased effort, in more enlightened, intelligent endeavor.

This movement in general social life finds its counterpart in humanitarian projects for the re-education of those unfortunates who have lapsed from normal conditions, for the restoration of faculties, the loss or disuse of which are the results of disease, of ignorance or neglect. These projects based upon known needs and modern conceptions and prompted by human sympathy and humanitarian impulses have been in operation in many localities and in certain institutions a sufficient length of time to have reached what may be termed the growth stage.

The basic or foundation principles of re-education of these mental unfortunates who have lapsed from normal conditions are largely the same as those for the development and training of normal cases. It is obvious, however, that the task is made manifold more difficult than in the normal case, because of the necessity of overcoming, to a great extent, protracted periods of introspection, unusual cases of inhibition and habits more or less fixed through absence of initiative due to years of institutional life and other causes.

It may be well to emphasize here the fact that the great majority of such cases under consideration might easily have been prevented had the mental life of these cases been accessible to wise guidance at the proper early formative period. "An ounce of prevention is worth a pound of cure" here signifies that advantages of constructive work should be found and applied through a working knowledge of the principles of mental hygiene in every community. The efforts to spread a propaganda of this nature have been so insufficiently planned and organized, so little understood, so apparently indifferently promoted as to render them practically futile in the enlightenment of the public or even an appreciable number of individuals to the end that mental conflicts and social maladjustments may be distinguished and treated before developing anti-social conduct and mental abnormalities.

The necessity for the clothing, housing, care and comfort generally of physical and mental

dependencies always have been apparent, but these are not sufficient in the present social order, nor are the great standards of life met in this way. If creature comforts were all, if material interests alone are worthy of consideration, if man were made his brother's keeper in none but the physical sense, then it would be a simple problem indeed, in the present as in the past, to perform humanitarian duty in the administering of the requirements of mere existence to those less favored than ourselves. Pope's assertion "Man's inhumanity to man makes countless thousands mourn" has its counterpart, however, in human endeavor and human sympathy which rescue to society, in some degree at least, those who by circumstances or by misfortune would be denied otherwise any of the privileges, benefits or advantages other than those contributing to prolongation of life.

The institutional history of progress in the care and treatment for the mental reconstruction of patients is a story of individual struggle and comparatively slow development. The encouraging aspects of the present situation come from the widely growing interests in the subject and from the fact that many of those so interested are putting wise, expert study and effort, not only to those practices which are of known value, but to their extension and to the consideration of appliances, methods and equipment desirable in the way of further advancement.

Confinement and restraint of the insane were the principal features in their control and management prior to the last thirty years. Here and there instances are noted of the fact that in a large number of cases restraint reaction was contrary to the results intended and expected—the tendencies it was designed to remove were developed and rendered continuously active. Violent and destructive habits, moroseness and other equally undesirable traits had been engendered. Discussions and criticisms resultant upon comparisons in non-restraint cases continue for many years during a period of enlightenment by and through the visits of institutional managers and superintendents to institutions of a similar character in European countries where methods of restraint had come into disuse.

The result of a more uniform movement toward non-restraint was far more satisfactory than previous sporadic efforts, inasmuch as it

now has been determined that patients released from restraint should have some means of outlet for energies hitherto inhibited. This, it must be understood, was not accomplished without some difficulty, since at first the non-restraint idea in many places did not include organized plans for occupation of patients. Within the past thirty years non-restraint has been introduced in practically every state in the Union.

The wisdom and practicability of non-restraint would naturally be dependent upon the development of industries, the proper organization for recreation in the way of games, amusements, etc., and the substitution of sympathetic, personal care for restraint and intimidation in refractory cases. The utilitarian aspect, however, should be lost sight of in the therapeutic value in the matter of occupations. The advantage to institutional organization and the regulation of the physical and moral actions in individual cases are not by any means to be ignored.

In occupational work for reconstruction, as in all other educational work, evaluation through tests and individual and group practice effects are of prime importance. This is also true of co-operation of these insane subjects, as a prerequisite to interest, just as in normal cases which is best secured through study of and conformity to individual adaptation. In this way new habits may be established upon the foundation of the old since interest may thereby be diverted into new and better channels of thought and action.

Occupational therapy as an adjunct to and as a part of the treatment of mental disorders in the State of Illinois is of comparatively recent development. It must be said, not to the credit of our state, that the value of this therapeutic aid has not received the recognition deserved and especially has it not been applied to those of our wards who are so much in need of it. The patients who are in the care of our great institutions, through no fault of their own, have indeed had every opportunity to become institutionalized.

It is quite true that efforts have been made to employ the patients who have been committed by the courts; in fact, the industrial side of hospital life has received considerable attention in some of our state institutions. The value of employment has been emphasized in practically

every report submitted by the superintendents of the state hospitals. It is also equally true that efforts have occasionally been made to form classes and to engage the attention of some of the patients so obviously neglected. There has been, until comparatively recently, no serious effort to distinguish or separate the occupational from the industrial group. Spasmodic efforts along these lines have heretofore failed because of a want of a definite program and because of want of capable leadership. The war, with all its ravages, more than anything else, is responsible for bringing forcibly to our attention the necessity of reconstruction work and has shown us that re-education is applicable to the mental as well as to the physical side of man.

In order to carry out the work of reconstruction a department of occupational therapy was established at the Elgin State Hospital in March, 1918. A superintendent was placed in charge and assistants employed. Such a department having been in operation now for more than two and one-half years, it might be well at this time to analyze some of the things accomplished and to attempt to answer some of the questions which might be pertinent thereto.

- 1. In an institution of average size how many patients are in need of occupational therapy?
- 2. What activities are most suitable?
- 3. What good, if any, can be accomplished?
- 4. What are the discouraging features?

After the establishment of our department it became apparent that if effective work was to be done a complete readjustment and reclassification of patients would have to be made. This was done and resulted in transferring of approximately nine hundred patients. In making this readjustment the following grouping was employed:

	Males	Females
Diagnostic	18	21
Hospital	62	31
Infirmary: tidy	105	145
Infirmary: untidy	29	22
Acute mental hydro: restless	26	19
Acute mental hydro: quiet	10	14
Acute mental occupational therapy: restless...	1	4
Acute mental occupational therapy: quiet	33	18
Occupational therapy care for self: irritable..	35	63
Occupational therapy care for self: not irrita- ble	73	92
Occupational therapy habit training: irritable..	22	47
Occupational therapy habit training: not irrita- ble	44	86
Vocational training: care for self.....	11	6
Vocational training: supervision.....	24	5
Industrial care for self: irritable	1	48

Industrial care for self: not irritable.....	424	362
Industrial supervision: irritable	58	48
Industrial supervision: not irritable.....	44	55
	1,019	1,086

It will thus be seen that large groups of patients need reconstruction therapy, that this group consisted of approximately twenty-seven per cent of our population and from the standpoint of both patient and the hospital, the establishment of the department was a necessity.

Following the readjustments mentioned it became apparent that occupational therapy should be prescribed for newly admitted patients as well. Accordingly, the scheme mentioned above has been made applicable in the consideration of diagnosis and treatment and after a thorough consideration of the patient's mental and physical condition a prescription for occupational therapy is written on the following blank:

PREScription FOR OCCUPATIONAL THERAPY

Ward..... Date.....

Name..... Sex..... Age.....

Previous vocation..... Psychosis.....

Special aptitudes or interests.....

Condition to be treated.....

Results desired

Dangers, warnings and suggestions.....

Type of Occupation—

Mechanical..... Intellectual.....

Monotonous..... Varied.....

Duration..... Hours..... Increase gradually.....

Intermit with..... Rest..... Other occupation.....

Exercise, games for..... Hours.....

Record results, daily, weekly, monthly.....

Report in..... Days.....

Signed.....

Activities at the present time are carried out on the wards, occupational centers and in outdoor games and sports. Bed occupations have been introduced to a very limited extent. The work on the wards consists principally of paper work, string work, wood work and the like. At the occupational centers more advanced work in the way of basketry, weaving, etc., is indulged in. A better knowledge of the various activities may perhaps be obtained from the graded occupations compiled by the superintendent of the department:

GRADE A	
Tracing patterns and designs	Wood carving
Cutting stencils	Tin work.
Stenciling	Crochet
Weaving—	Sewing and quilting
braid weave	Flower making
Swedish frame	Hook and Persian rugs
card weaving	Modeling—
pattern	pottery
Basketry—reed	pernedello

Knotting and tying	Modeling—
Leather work	papier mache
Bead work	free hand
GRADE B	
Cuting rags for carpets	Coping saw, wood and celluloid
Braiding, matting and raffia	Painting, enamel coats
Hooking rugs	Stick printing
Plain and simple sewing	Stuffing dolls
Modeling, simple	
Pasting puzzles, boxes, toys, etc.	
GRADE C	
Paper beads	Weaving on card board looms
Rake knitting	Sandpapering and filing
Coping saw—simple	Weaving, simple frames burlap
VOCATIONAL TRAINING	
Academic and commercial subjects	Book binding
Assembling wood problems	Drawing and lettering
Carving stools, rush matting	Painting designs on toys
KINDERGARTEN	
Ravelling burlap	frames
Tearing paper and rags	Pasting pictures on toys
Winding paper and rags, warp	Painting prime coats
Sorting colored material and beads	Stringing beads
Cutting stuffing for toys	Sewing outline on cards
Braiding, lacing, buttoning on	Spool knitting
	Block and stick printing

The results obtained on the wards devoted to habit training are gratifying and perhaps the most striking. It would seem a hopeless task to attempt to interest the most stupid dementia præcox patient in the care of his clothing, to dress himself, to have any regard for table etiquette, to make his own bed, and the like, yet the same has been and is being done. These patients have a routine for the day and it is as follows:

7:10 A.M.—Breakfast
 7:40 A.M.—Tooth brush drill
 8:00 A.M.—Special attention
 8:30 A.M.—Ward work, with instruction relative to the care of clothing, etc.
 10:00 A.M.—Walk about the grounds or exercises on the lawn
 11:00 A.M.—Special attention
 12:00 M. —Dinner
 1:00 P.M.—Special attention
 1:30 P.M.—Instruction in the occupational therapy class or exercise in the amusement hall
 3:00 P.M.—Special attention
 3:30 P.M.—Walk about the grounds or exercise about the lawn
 5:00 P.M.—Special attention
 5:30 P.M.—Supper
 (If weather permits, recreation on the lawn after supper)
 9:00 P.M.—Special attention at bed time.

Habit-training and occupational classes were established on the male wards for untidy patients in June, 1919. Since that time ninety patients have been treated in the various classes. Of this number eight have been paroled home, thirty-four have been transferred to tidy wards, five have died, five are doing industrial work, six are now tidy and twenty-three remain in the class.

Classes among the women on the untidy wards have been established a much shorter period and the results, while good, are not quite so pro-

nounced, due to the fact that among the patients of the classes in question can be found cases strictly organic in nature and consequently not so amenable to treatment. Of the original seventy-six patients, thirty-seven remain in the classes.

The interest in outdoor games and sports is noticeable. Two baseball teams have been organized among the patients. They are fully equipped with uniforms and all necessary accoutrements. The rivalry is always keen. Games are played nearly every day, either among themselves or with teams from the city. The punching bag, quoits, horizontal bars and the pike are always popular. One of the most striking feats of all, however, is the ability of the physical director to arouse the apparently hopeless, indifferent, stupid patient to participate in simple exercises and games.

Permit me to illustrate at this time a few instances of results which have been obtained by briefly outlining illustrative cases:

CASE 1. E. Y., married, aged 27 years, admitted October 15, 1917; diagnosis hebephrenic dementia præcox. Had shown mental symptoms for four years prior to admission. Her weight was 110 pounds. Patient was on an untidy ward when she was assigned to the re-educational class; would soil herself, would not dress, and showed a marked loss of interest. In April 1918, after six months' class work, she is reported to be neat in her person, does everything asked of her and is taking an interest in kitchen and bedroom work. She still, however, admits hearing voices. Her first work was sewing quilt blocks together, with a little basket making. She later was able to weave rugs and make good baskets. She was transferred to industrial work and has been steadily employed industrially since that time. Patient is in the hospital at the present time.

CASE 2. P. E., aged 25 years, single, bond and stock salesman. Began showing symptoms two years before admission to the hospital. Admitted March 14, 1919; diagnosis, hebephrenic dementia præcox. Practically ever since admission to the hospital patient has been very indifferent; showed a marked loss of interest; soiled himself and would continuously lie in bed. Frequent attempts at re-education were unsuccessful at first. On account of his untidy habits he was sent to the habit-training ward. With persistent endeavors he showed steady improvement. He was paroled on December 14, 1919, and recently visited the hospital. He was in excellent condition, has been working steadily for the last eight months and seems to have made a satisfactory adjustment on the outside.

CASE 3. A. H., aged 28 years, admitted May 26, 1916. Diagnosis, dementia præcox. Onset about two years prior to his admission. Was a baseball player of national reputation. This patient hallucinated quite

actively, was irritable, violent, and it was necessary to place him on one of the violent wards. He was very careless of his personal appearance. In the spring of 1918 a hospital baseball team was organized and this patient was taken out for practice. At first he did not co-operate, but later showed a great deal of interest in the game. He showed continuous improvement and was able to play with a semi-professional Elgin team. The improvement was so marked that it was deemed advisable to allow him to be paroled home. While he has not recovered, he is able to hold a position steadily and plays baseball in a semi-professional team.

CASE 4. D. M., admitted November 13, 1918; aged 33 years; a school teacher by occupation; was diagnosed as paranoid dementia praecox; began showing symptoms during the ward after she had enlisted as a Red Cross nurse. On her way to France she began hallucinating and on arrival there was placed in a base hospital on account of her active mental symptoms. When admitted to the Elgin State Hospital she was very resistive and hallucinated actively. She made frequent attempts to escape and showed marked indifference. She began the class work and took a great deal of interest in calisthenics; began helping the teacher with this work; played the piano for the other patients and showed gradual improvement. She was paroled December 3, 1919. She is still on parole and visited the hospital recently. At present she holds a very responsible position in a large office.

CASE 5. A. L., admitted January 17, 1919; diagnosis, depressed phase of manic depressive insanity. Patient showed marked indifference; had a habit of picking her face; took no interest in anything and cried a great deal. Hydrotherapeutic treatment seemed to have little effect. She was placed in an occupational class, where she began doing simple work. Her improvement was gradual. She made a complete recovery and has lately visited the hospital. According to her husband's statement, she is as well as formerly.

CASE 6. L. P. E., aged 26 years, librarian by occupation; single; has not been well since 1914; was very indifferent when admitted and would not answer questions; was very careless about her personal appearance and hallucinated continuously. She was placed in an occupational class and shortly began to take an interest in the work. Two months later she was reported to be quiet and orderly; became neat in her personal appearance and was well enough to be given a parole of the grounds. Her improvement continues and she was paroled on January 2, 1920. She is at present employed in a library and has evidently recovered from her attack.

CASE 7. L. C., aged 22 years, stenographer; admitted November 15, 1918. Diagnosis, dementia praecox. Patient was very careless, silly, impulsive, inadequate and would lie about the floor, exposing her person; at times was noisy and talkative and inclined to be untidy. This condition continued until January 31, 1919, when she was placed in a re-educational class. Previously she had refused to do practically any work

and had become careless and indifferent. One month later it was noticed that she was showing a gradual improvement and was able to be transferred to a better ward. Her improvement from that time on was continuous and she was paroled on June 15, 1919. At present the patient is employed as stenographer.

CASE 8. F. B., aged 27 years, admitted May 17, 1918; hallucinated for two months prior to her admission. Patient was described as being depressed; accused herself of various wrongdoings and attempted suicide prior to her admission. She would not care for herself and was very listless and indifferent. She showed gradual improvement following a short time in the re-educational class; became more cheerful and on December 8, 1918, was given a parole of the grounds. On the 21st of the same month she was paroled to her husband. The last report received indicated that the patient was able to take care of her house, though still inclined to be slightly depressed at times.

Occupation in order to be of any value to patients, must have a certain amount of variety and changes must be made from time to time. This we have attempted to do. The classes among the non-irritable group have short working periods and the monotony is broken by various diversions. Any occupation should not be and is not permitted to be followed to the point of fatigue. A great factor in this work and one of the things most frequently overlooked and neglected, is the failure, after arousing the interest of the patient, to impress sufficiently the usefulness of the work in question. This has been borne out on more than one occasion. Aimless work should be avoided as much as possible and the patient should be convinced of the use of the same.

It must not be considered that a department of this kind is not without its trials and that the expense of operation is of no small import. The salaries of directors, aides and assistants must be considered and the cost of supplies reckoned with.

Economy in administration is a necessity. On account of the fact that supplies in state institutions are issued more or less freely, employees frequently show a carelessness in the use of such articles. The proper use of waste materials is important and one department of the hospital frequently supplies another in this way.

The difficulties to be encountered are not so great but that with perseverance they may be overcome. The lack of team work, the failure of employees to see the benefits to be derived and

the apparent indifference of some members of the hospital staff, are some of the factors which time only will overcome. Occupation is and has proven to be of therapeutic value and should be carried on. The monetary value of the work is of minor importance and may be ignored. The patient's mental welfare should not be sacrificed—he should not be permitted to become so thoroughly “institutionalized” as in the past.

OBESITY*

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It is needless to spend much time in definition or description as this is one of the many afflictions that is most easily recognized by anyone—but certain *standards* exist to differentiate the normal from the abnormal, the standard of height and weight is in general use and can be seen on almost all scales in restaurants and gymnasiums.

STANDARD HEIGHT AND WEIGHT.

	Lbs.		Lbs.
5 feet 1 inch	120	5 feet 7 inches.....	150
5 feet 2 inches.....	125	5 feet 8 inches.....	155
5 feet 3 inches.....	130	5 feet 9 inches.....	160
5 feet 4 inches.....	135	5 feet 10 inches.....	165
5 feet 5 inches.....	140	5 feet 11 inches.....	170
5 feet 6 inches.....	145	5 feet 12 inches.....	175

(Fat should constitute about one-fifteenth to one-twentieth of one's weight.)

This table is convenient but not absolutely adaptable to everybody as it does not allow for the heavy-weight wrestler with his unusual bulk of muscles and heavy bones, also people built very broad and stocky as a family trait or characteristic of certain races, and those people having long, heavy bodies with short, stocky legs who on sitting down have the appearance of being six feet tall, but on standing up are found to be short. I am informed that General Sherman was of that type, that on horseback he appeared to be a six-footer.

Etiology. Obesity is not caused by any animal or vegetable germ nor by any other invisible substance as is the case with many diseases we have to deal with. Obesity is always caused by something very visible, that is, an excess of food, in other words obesity is caused by an excess of intake and a deficiency of output, but it requires considerable forceful, logical proof to convince most fat people of this fact; many claim “it is just natural” for them to be fat, whatever they mean by that; others that the water swells them

up; and still others that the air bloats them. Many feel the reproach of the accusation of gluttony and seek escape by the claim that when they are hungry they must eat, and I remind them of the fact that the drinker we used to have with us told the same story, when I am dry, I have to drink, and the queer thing was that they were always dry. Both acquired their habit from long-continued practice. So I maintain that obesity belongs to the habit diseases. A habit is formed terminating in its characteristic effect. From infancy to maturity at about the age of twenty-five the body uses food for growth, energy and repair. After that period food should be required only for energy and repair and, therefore, less food should be needed from a physiological point of view as the building is now practically completed, but what do we find? The eating habit, instead of stopping here, grows with the advancing years. In my thirty-one years of experience, I have had the opportunity to intimately know and watch for years a number of families and know that many would consume three times the quantity of food at forty that they did at twenty-five years of age. As we pass from childhood to puberty and from puberty to adult life, we leave behind us many of those traits, but eating is one of those traits that instead of being curtailed on the completion of the building, is stimulated and practiced, sometimes with the false idea that eating makes strength. This is a fallacy as I have seen many times. The first thing a fat person does is to look for a place to sit down wherever he goes, be it a street car or any other place where opportunity presents itself. There seems to be an unwritten or unrecognized law, we have a tendency toward always wanting to do something to make our bodies feel good, called by some the Joy of Living. Thus some live in an atmosphere of sexual thought continuously. In others their thoughts run to whisky, drinking, dancing or cabaretting, cigars, cigarettes, candy, bonbons, etc., and many people have little or no will power to curtail these desires; many of them are only circumscribed by the financial expense, while in others their thoughts are always on the idea of locating some place where there is plenty of good eats. Strange to say all these tendencies are classed as immoral except the latter. So it is that a minister's wife can gorge, be a glutton and though she weighs two hundred fifty pounds or

*Read at meeting of Stock Yards Branch, Chicago Medical Society, April 14, 1921.

more, yet be considered a very moral woman. I believe one vice is as bad as another! And a glutton presenting the *prima facie* evidence, should be marked as immoral as the man with his excessive sexual tendency, the man with the red nose or the girl indulging in sexual intercourse out of wedlock, and here let me state that the joke that appears to me as deserving a marking of 100 per cent. is the fat woman scolding her thin husband for his drinking habit.

Pathology. Excessive fat is unsightly, insatiable and inconsistent with good health. First, it is unsightly because if you will strip a fat man or woman you will find the hang belly, the hips bulging, the shoulders rounded, often presenting a stooped appearance, the neck bulging, the breasts hanging, in fact the entire physical aspect presents the characteristic of the infantile type rather than the adult type, whereas in men the physical construction has many points of similarity to the female in the large breasts, the hips, the large buttocks and the rounded appearance of the limbs, obliterating the masculine muscular outlines.

Excessive fat is insanitary because it is well known that they must resort to more frequent washings, spongings and the use of toilet waters and deodorants.

Excessive fat is inconsistent with good health because, just as the fat is packed around the exterior, interfering with the freedom of movement, it also obstructs or hampers circulation, but is even more marked internally where fat accumulates in excess around the liver, the kidneys, the heart, the bowels, etc., and gradually also invading the vessel walls, causing a fatty infiltration and by and by a fatty degeneration, being directly responsible for apoplexy due to hemorrhage from this fatty degeneration of the arteries, high blood pressure from the general pressure symptoms and retention of excrementitious products. Nephritis from overworked kidneys, pathologic gangues in the blood vessels within or obstructing circulation from pressure from without. From the continuous overloading of the stomach, this important organ becomes dilated, the walls become stretched and weakened, resulting in so-called dyspepsia, flatus and gastropnoia, most usually becoming associated with visceropnoia. Some years ago Mayo in an article in the *Journal A. M. A.* showed by illustration

that the healthy stomach was really horizontal to the axis of the body, whereas I find in all obesity cases this organ is more inclined to a position approaching the upright or a trap formation with gastropnoia. Fat people are also more prone to appendicitis and catarrhal gall duct obstruction or gall stone formation. I cannot go into extensive detail of the pathologic conditions associated directly with obesity, but would urge surgeons and pathologists or others who may be interested in this line to not only treat patients for their particular complaints, such as gall stones, dyspnea, dyspepsia with flatulence and regurgitation of food, nephritis and so forth, but to endeavor to find if these particular and many other complaints bear some relationship especially to the obesity of the patient. While dwelling on the subject of pathology I want to bring to your attention two cases, and perhaps others similar may be found, that are interesting. In persons who have been fat for many years, it sometimes happens when they reach the age of fifty-five, sixty or sixty-five, that suddenly, without any apparent reason, they lose weight (fat) with almost alarming rapidity. This I believe happens where the fat, getting firmer and firmer, at last reaches a point where the blood vessels get compressed so much as to shut off the necessary interchange of fluids and thereby nutrition and a retrograde metamorphosis takes place.

I had two such cases under my care where I had ample opportunity to study the cases for some years. The first case, a butcher whom I had known for sixteen years, had no other complaint except an occasional cough, some pharyngitis principally from smoking, and at times slight rheumatic muscular pains; gradually his weight increased from one hundred and seventy-five to two hundred and three pounds. This weight has kept up for a number of years when, without any discoverable cause, he lost weight so rapidly that he went down to one hundred and sixty-two pounds in a little over two months' time. The second case was that of a woman whose physician I had been for over fifteen years. She was not much over five feet in height but very chunky, had the largest breasts of any small woman that I had ever seen. She commenced to lose weight (fat) without any known cause; did not complain about anything. The examination in both cases was negative. She lost fifty-five

pounds. The last reports from both are that they are feeling fine and working.

Before closing this chapter on pathology you will, I hope, allow me to quote a joke, though I recognize that a joke is not supposed to have any relation to pathology, still I believe there is a pathologic point to it:

Sunday School Teacher: "Can you tell me who made you, Joseph?"

Joseph: "God made part of me."

Sunday School Teacher: "Why, what do you mean by that?"

Joseph: "He made me real little, and I just *growed* the rest myself."

I was reminded of this joke when treating one of my cases, Mrs. T., whose record I have here with me. She felt somewhat indignant when I told her she ate too much and she said, "Wall, I am this way because God made me this way," and I told her, "No he didn't. When he first made you, you looked altogether different."

SOME POINTS OF SPECIAL INTEREST

Point 1. People afflicted with obesity do not generally consider themselves as sick people, perhaps because everybody tells them that they look so healthy and strong that they actually believe it themselves. They go to the physician complaining of stomach trouble, constipation, shortness of breath, pains in the muscles and the feet or ankles, which they consider a little cold or rheumatism and so forth. It is difficult or next to impossible to convince them that their excessive intake and deficient output, plus the choked condition of their system is responsible for these symptoms and often you will hear the expression, "Why, doctor, that can't have anything to do with it because I have been fat for years," or the expression, "it runs in our family," or "Grandmother was fat just like me."

Point 2. Some of these people have looked upon me with an expression of ridicule and on others I have seen a smile of triumph as they would proceed to show me that I was entirely wrong because Mrs. X, who lived in the family and ate the same food on the same table and who was "really a bigger eater" was always so thin that you could hear the bones rattle. In other words they are firmly convinced that neither the quantity or quality of the food can be responsible for their obesity because as they claim Mrs. X,

Y., or Z. consumes as much or more food and is always thin; furthermore, they inform me that they do not use sugar in their coffee, nor any milk, or they don't eat pie or cake, or that they only eat two meals a day, and I believe physicians have been and are misled by such arguments. It is my impression that this is one of the most important points to be analyzed. For the purpose of illustration I often relate the following:

More than twenty years ago I had occasion to attend a horse market. I was intimately acquainted with one of the horse traders who was an old-time veterinary. While there I saw him pick up the fresh dung of a horse that was to be sold. He broke it open and examined it. Being curious at this procedure, I questioned him concerning the object and this was his reply: "Well, Doc., if I had that critter I'd want to know where my oats was a-goin' to. Look at here, more an' half of it in the manure!" From that time on I have made it a point whenever opportunity presented itself to make at least a macroscopic examination of the passages of my patients, not alone of my thin people but also in many different complaints. You will be surprised to note the quantity of undigested, unconverted, unused food passed by people who have absolutely no complaint of any kind. I firmly believe that if the undigested, unconverted, unused food passed by the American people could be procured in a usable condition, that without the shipment of other food the starvation of Europe could be immediately relieved. This explains why some, I may say many people can consume as much food as those afflicted with obesity and still stay thin.

Point 3. It should be noted that the desires of the mind may act reflexly on some of the organs of the body, thereby creating activity upon the particular organ and, vice versa, stimulation or irritation of organs may act reflexly on the mind, producing a desire, but either of these occurrences, whether the current flows from the mind to the organ or from the organ to the mind, should invite the critical examination of a physician, to again differentiate these reflex activities from a real necessity of the body. In other words, because a person feels hungry is no proof that the body needs nourishment, no more so

than that sexual intercourse must be indulged in because a desire registers itself.

Treatment. There are some points in the treatment of obesity upon which considerable difference of opinion exists, particularly in the matter of dietetics, also in the use of drugs. On the other hand, it is generally agreed by all authorities that in obesity there is too much intake and a deficiency of output, though some may state the same idea in a little different language. The treatment of obesity consists of two parts, first the reduction, and second, the re-education of the patients to teach them to live differently from their former way of living, otherwise a recurrence must ensue. We have learned a great deal from stock raisers and farmers and we are informed that when a farmer gets ready to ship his stock to market he puts that stock through a fattening process by first locking them up to prevent them from running off the fat, causing a diminished oxygenation and diminished wear and tear by exercise; second, by increased feeding. While in all cases of obesity the curative methods aim to check the formation of fat, to rid the body of the accumulated fat, I add to this, *Re-education in the manner of living*. This object is attained by (a) restricting the diet, (b) increasing the oxidation and catabolism by exercise and outdoor air, (c) by increasing the output through the bowels and skin. In looking over the literature of the popular methods used for the cure of obesity, it is surprising to find what diversity of opinion exists especially in regard to dietary, and I believe the average physician will be puzzled to know which method to adopt. The following is a condensed review of the best known methods:

The Harvey-Banting Method was the first of the dietetic systems for the cure of obesity. It was devised by Mr. Harvey, of London, and used with great success in the case of William Banting in 1862. Animal food is freely allowed but the carbohydrates greatly reduced, and the amount of fat cut down to the lowest limit. The supply of water is not restricted.

In the *Ebstein Method* the fats are increased, carbohydrates greatly reduced, the proteids practically unchanged. A person whose diet is rich in fat requires less to eat and suffers less from hunger than one who, following Banting's treatment, has almost no fat in his food. Hence

Ebstein included butter and cream in his dietary.

The Oertel Method, consisting of a combined dietetic and mechanical treatment, was first used in treating circulatory disturbances dependent upon heart disease. The loss of weight was so steady and so pronounced that he employed it in obesity. The fluids as well as the fats and carbohydrates are restricted. He believes that diminishing the water in the body aids the reduction of fat and that it also lessens the weakening of the heart muscles, which is the starting point of most of the danger of obesity. The second part of the treatment consists of systematized exercise in the shape of walks and hill climbing. This produces combustion of the body fat, preserves the tissue albumen and strengthens the heart.

The Schweninger Method is somewhat similar to Oertel's. No water is allowed at meals, and the amount of the whole day is restricted to less than a pint. Hot baths and massage are important factors in the treatment.

Bouchert has obtained excellent results on diet of milk and eggs. No other food is allowed for a period of twenty days. The patients are usually greatly constipated.

Sir Dyce Duckworth recommends a dietary more liberal and less irksome than that of Ebstein or Oertel. He would allow twelve to fourteen ounces of meat a day, six to eight ounces of bread, four to five ounces of green vegetables, one to one and a half ounces of butter and fat and thirty to thirty-five ounces of fluids.

York-Davis was the first to advocate the use of thyroid extract and it was soon after employed by Leichenstern in Germany.

Love states that strychnine is a valuable adjunct to the thyroid treatment. *Von Hoessalin* conducts his treatment along four lines: first, proteid fat diet resembling Ebstein's; second, hydrotherapy; third, thyroid extract, and fourth, regular exercise.

In some parts of Germany there are places with extensive vineyards, where some of these people have taken the grape cure. They are encouraged to eat all the grapes they can consume and drink grape juice, while in other parts of Germany, where there is considerable dairying, they have what is called the milk cure, where either buttermilk or skimmed milk is consumed in large quantities with practically no other kind

of food for the reduction of obesity. *Moritz* (*Muenchener Med. Wochenschrift*) advises an exclusive milk diet, the patient receiving two quarts daily, given in small amounts at intervals of about three hours during the day. A laxative may be necessary.

I would here call your attention to the question that may be asked, what is the secret of the success of curing people of obesity in one place with eggs and milk, in another with grapes, and in another place with milk, while all the before-mentioned authorities have their own particular dietaries. I have wondered why no one has advocated the bread and water diet, as our jails and penitentiaries furnish plenty of proof of the efficacy of this treatment in cases of obesity. I take this opportunity to offer for your consideration my explanation as to why all these methods have no doubt been successful. Whenever you can pull these obese people away from their accustomed meals and change their mode of living by calling it a cure and you put them on a grape diet, a milk diet or other selected diet, the continuous oneness removes the old habit, the very monotony of some of these cures is sufficient to remove the incentive to overeat; in fact, eating that had been heretofore the great pleasure of the obese, just as drinking was to the drinker, becomes repugnant, and it reminds me of the patient who had been ordered to eat applesauce three times a day by his physician. On the third day he informed the doctor in a rather dejected but earnest manner, "Say, Doctor, honest I can't go any further on that diet; I feel as if there was an apple tree growing out of my neck, and I have lost all appetite for everything."

In the foregoing I have given you an outline of the treatment and methods as advocated by the various authorities, and I hereby take the opportunity to present to you my own experience in the treatment of obesity. My method of treatment is not only a success but is so practical that it may be employed by any physician. The method I employ now is different from the method I employed years ago. For a number of years I passed through a stage of experimentation, particularly with drugs, and was sorely disappointed. I did not understand the dietary so well and I believe neither did anyone else on account of the conflicting views of the various authors, neither did I succeed in controlling the

patient, so I relied principally on exercise and sweating, having learned from my experience in gymnastics and massage and Swedish movements that weight could be reduced by these methods, but finding a hot room or steam room impracticable, as these people have a mortal fear of the heat affecting their heart or causing apoplexy I tried a cabinet heated by alcohol but soon discarded that and had a cabinet constructed on a platform heated by gas, the heat conducted to the floor of the cabinet by a copper pipe from a gas heater by the side of the cabinet, using a high registering thermometer to record the temperature. This was a success, but the heat was always burning or irritating on the skin. I finally discarded that and constructed an electric light cabinet lined with mirrors. To my surprise I discovered that I could use a higher degree of temperature without the burning or irritating effect and patients would perspire at a lower temperature more profusely. Aside from the subject of obesity I have been firmly convinced of the efficacy of phototherapy ever since. I believe the heat rays are carried into the body by the light rays and that the different colors of the spectra have different effects as has been shown by numerous workers in this line. Of other measures I have used years ago, I may mention electric baths, not so much for the reduction but rather to stimulate the musculature of the body, also massage, Swedish movements and medical gymnastics.

Having noticed that patients sitting up while in a hot cabinet sometimes had a tendency to feel faint, I finally constructed an electric couch where they could lie down, but all these things requiring a great deal of work and the patients requiring constant watching, or attendance, I finally discontinued the use of all these appliances as too impracticable excepting for sanatoria. While following this method of treatment, I required my patients to take a treatment every day excepting Sundays. I carried on this work for a period extending over fifteen years. But it would take too much time to relate in extensive detail my experience in this experimentation; in reference to sweat baths I may say that it is not alone the loss of weight by perspiration that should be taken into account. I have learned, for instance, by watching patients afflicted with other diseases such as tuberculosis,

typhoid, etc., that fever causes the loss of flesh even if there is no perspiration, but the higher the fever runs, particularly if accompanied by perspiration, the greater is the loss. I tried to apply this lesson to my obesity patients by producing an artificial fever by the heat in the cabinet to break up the fat by a dilatation of the peripheral blood vessels by means of the heat to force the blood into the obstructing fat, by increasing oxygenation, by increasing the lung expansion and finally by the elimination. Cold water washings either in the tub or shower should always follow the sweat baths, for two reasons: first, to check the continuation of the perspiration and discomfort on dressing, accompanied by lassitude, weakness and depression; second, to produce a shrinking of the skin to prevent flabbiness, as goose skin of cold water application is familiar to you and for its general bracing effect.

Method of Treatment. The method and treatment of obesity that I have followed now for over five years and which is really the result of years of experimentation is as follows: I am not satisfied to treat a patient just for the obesity, my intention is to have my patients stay cured, and this is possible in a large measure by passing the responsibility to the patients to use their will power to prevent a recurrence, so I emphasize that "*Re-education*" to teach the patients how to live is as important as the cure. Somebody once said that if you can make a dog understand just what you want of him, he will do it. It may seem a peculiar comparison, but I believe the same is true of these people; that is, make them understand. On starting in treatment about the following dialogue ensues: "Mrs. Smith, after having made an extensive examination and getting your history, I find you are altogether too fat. You tell me you gained ten pounds last year and ten the year before, that makes twenty pounds. You are not only too fat now but at that rate you will weight fifty pounds over your former weight in five years and even your former weight was too much. You're more concerned about your looks and greater difficulty in moving around, but I, as your physician, view your condition with a more serious aspect, that is, your health. You may make yourself believe you are healthy because everybody tells you how healthy you look and because getting fat was a pleasure, but sooner or later the system rebels

from the overload. Your intake is excessive for the actual needs of your body, while your output is insufficient." Mrs. Smith here remarks, "Well, I hope I won't gain any more," and I counter with the remark, "Mrs. Smith, you need something more than hope, because that will not prevent you from gaining." Mrs. Smith remarks, "Well, I did not think I was eating too much, because when a person is hungry they must eat," and I inform her that everybody must eat, but fat people by continuous practice learn to eat more and more just as a drinking man learns to drink more and more and she must now learn how to break that habit and not eat because she thinks she must eat, but eat only sufficient food to nourish the body and not store up the food in fat. In this advice I lay great stress on *quantity*.

I then inform the patients that the reason why they have such enormous intake is in reality because the food tastes good. It is a pleasure to eat, for in the foregoing recital I have shown that the oneness or monotony of a milk or grape or other diet takes away the incentive to eat. They lose their appetite. Figuratively speaking I would say that a fat man's palate is the root of his evil and this point I consider one of the most important factors in the treatment of obesity; take away the appetite and they will stop eating.

I then proceed to issue the following rules: You will weigh yourself in ordinary clothing without an overcoat or hat and that is the first thing to do. Select a drugstore or gymnasium scales. Do not select a scales that is outdoors, as the rain, sunshine and exposure to the weather changes are not conducive to accuracy. Having selected your scales, make it a point to always weigh on the same scales, as a variety of scales will differ just like a variety of watches differ in time. You will carry a small notebook and pencil in your pocketbook or pocket. You will weigh once a week or ten days and always write down the date and the weight in this notebook. In regard to your diet I want to warn you that you must discontinue the use of all condiments, as they create a false appetite and make you eat food that your body does not need and thereby makes fat. The condiments are pepper, paprika, pickles, horseradish, mustard, chow-chow, piccailly, Worcestershire sauce, etc. Now you will agree that if you had to eat meat without seasoning or condiments it will taste like leather, so you

had better discontinue eating meat altogether at least for a while, and if you make good progress we will allow a little meat after a while, especially on Sunday or other holidays. Butter, peanut butter, cream, ice cream and sugar will be discontinued, fats you don't need because you can live on the fat on your body. You may eat plenty of vegetables, spinach, mustard greens, cabbage, sauerkraut, blue cabbage, turnips, kohlrabi, lettuce, cold slaw, dandelions, rutabaga, cucumbers, radishes, onions, etc. Potatoes are usually barred on beginning treatment, but are added to the diet sparingly later on. Sweet potatoes and bananas are not allowed. Patients are urged to eat as much fruit as possible, fresh or stewed. The following is what I call my fruit diet:

DR. KERCHER'S FRUIT DIET FOR OBESITY

This diet is also used in some cases of chronic constipation, particularly in stout individuals.

Get some evaporated (dried) apples, pears, apricots, figs, raisins, etc., calling them No. 1, No. 2, etc.

Proceed as follows: These fruits should always be washed before preparing for use; the prunes after boiling are stoned and put through a meat chopper or chopped in a wooden bowl; raisins and currants are also chopped after boiling, as the skins prevent digestion even in a healthy subject. In the evening take a pint or more of No. 1; after washing add plenty of water and stew thoroughly; allow to stand in cool place over night. Next morning heat No. 1 thoroughly, having the same ready by the time the toilet is finished, then eat as much as is possible before taking any other kind of food. It should be eaten hot and no sugar is to be used. If possible, eat the same two or three times a day; at least before going to bed is a good time. The next day No. 2 is prepared and used the same way, and the next day No. 3, etc.

After having gone through with all, start by combining No. 1 and No. 2, No. 2 and No. 3, and so forth. After this combine No. 2 and No. 4, all even numbers; then combine No. 1 and No. 3, all odd numbers, and so forth. After this a further change may be made by other combinations, starting all over again with No. 1, changing every other day to fresh fruit, such as oranges, grapefruit, etc., or by adding any one of the following: lemon juice, orange juice, strawberry, vanilla, vinegar, allspice, cloves, etc. In this way something different is served every day for nearly a month. When finished start all over again.

I inform my patients that when they get hungry they can eat all they want of this diet. Crackers, dry toast, or bread or biscuit that are twenty-four hours old are allowed with this fruit diet. Instead of getting tired of this diet they grow to like it; it is not so monotonous that they want to quit. I am firmly

convinced that the fruit acids and vitamins contained in this diet, along with the fresh fruits used for a change, are of vital importance, aside from their replacement of other foods and "filler in," as it may be termed.

If carried out as here outlined, this diet stimulates the general circulation, the liver and gall bladder increases the activity of the bowels and kidneys, and takes the place of the other foods in obesity.

Before closing this chapter on dietary I wish to remind you that every authority on the subject of obesity and all the medical literature on the subject seems to dwell on some particular element of the diet that is responsible for this condition. I believe that to a considerable extent this is a fallacy and I want to emphasize the fact that *quantity* and not *quality* is of first importance and any measure you can adopt to cut down the quantity, plus the increase of output will crown your efforts with success, but the mere statement you must reduce the quantity of your food, will have no more effect than to tell a drinking man to stop drinking. One more point I wish to call to your attention and that is, that this paper will be one of the most noteworthy papers that was ever presented to this society, owing to the fact that in this entire paper on the subject of obesity I have not once mentioned the word calories and I confess I do not pay a bit of attention to the food values in terms of calories. I believe it is entirely impracticable of application in general practice and I have yet to see the physician who can apply it outside of a sanitarium. As a matter of fact I do not judge the patient by my remedies or by the food but by the condition of the patient.

Baths. As I have found sweat baths to serve a good purpose without danger if properly applied, I recommend them. The baths should be taken at least twice a week, if it is not possible to go to a bath house, have patients take very hot baths at home twice a week to begin with and every other day or oftener after the first week.

Patients often stay too long in the tub. Fifteen minutes is long enough. They should rub themselves with a loofah, not for the cleanliness, but for the superficial circulation. Washrags should not be used by grown people. Before concluding the bath the cold water faucet should be turned on, the patient sitting up churns the water to cool it down equally. It should be made as cold as possible. On getting out the patient

should lie down with only a sheet or other light covering, otherwise the patient will perspire again, which is undesirable.

The bathroom should be eighty degrees. The door of the bathroom should be left open for ventilation, as otherwise the oxygen being consumed very quickly in our small, wrongly constructed bathrooms, the patient faints. Every winter a number of people are found dead in bathrooms; weak hearts and lack of oxygen, I believe, is the direct cause.

Exercise. Home exercise may be used, especially in a room well ventilated, but it is best to insist that patients must go out every day. Slow, leisurely walks have no value. Continuous fast walking, running, jumping, hill or stair climbing, or most any other kind of exercise that jars the body is beneficial, such as horseback riding, swimming, tennis, handball, boxing, wrestling, bag punching, etc.

Medical Treatment. It would be taking too much time to review all the remedies that have been used in the years of my experimentation. I have tried all of the known remedies and some others I tried out on theoretical grounds. I now wish to present to you some remedies that I now use with success. They are elaterium, pilocarpin, hydrochlorid, thyroids, asafetida and tincture of lobelia and sometimes tincture of cinchona. The elaterium and fluid extract pilocarpin I formerly used in liquid form and found that patients often got nauseated and even vomited, especially if they were constipated, leading me to believe that in those cases the remedy worked up instead of down or if the beginning dosage was too large. So now I begin with "A" one-fifteenth grain elaterii, one-fifteenth grain pilocarpin hydrochlorid and after getting the patient's bowels opened up very freely, perhaps in the second week I add two grains dessicated thyroid to each dose and certain evidence leads me to believe that the action of thyroids is very much enhanced especially by the addition of the best glandular stimulant in our *Materia Medica*, pilocarpin hydrochlorid. The dosage may be gradually increased as will be noted in two case reports of people who were just recently under my care. The other remedy is "B." Tincture asafetida with lobelia or cinchona in simple water. Prescription "A" is used in capsules three to four

times a day I. P. C., etc., at night to increase the output and "B" is used before meals to check the appetite and thereby prevent the intake. I believe that one of the most widespread mistakes made by physicians when these patients complain of being tired and weak, is to prescribe tonics and telling them to eat more to get strong. What a fat person needs is something to stop them from eating.

In conclusion I wish to state that one of the oldest remedies in our *materia medica* is digitalis and it was generally assumed that nothing more could be added to our knowledge of its action and uses, but within the last year the literature has shed much new light on this old remedy. I would urge new investigation to be made with pilocarpin hydrochlorid. I find this remedy is not a depressor as has been claimed. It appears to me that physicians are more afraid of it than they are of strychnia or morphin. I find the more I use it the more I become convinced that I can use it in larger doses, that I get better results, that it is the best glandular stimulant in the *materia medica* and for this reason I have invariably used it in those diseases wherever K. I. was indicated.

Case 1. Male; married. Weight, 232. Occupation—Locomotive fireman. Diagnosis—Obesity.

December 16, 1920. Weight, 232.

No. 1—

R	Elaterii	2 grains
	Pilocarpin hydrochlor.....	2 grains
	Thyroid dessic.....	1 dram
	M. fiat. caps No. 30.	
	Sig. 1 T.I.D. 1 hour after meals.	

No. 2—

R	Tinct. asafetida.....	1 ounce
	Aynae simp.....	1 ounce
	M.	
	Sig. Dram just before eating.	

December 22, 1920. Weight, 217½.

No. 3—

R	Elaterii	3 grains
	Pilocarp. hydrochlor.....	3 grains
	Thyroid dessic.....	1 dram
	M. fiat. caps No. 30.	
	Sig. 4 a day.	

R Repeat No. 2.

January 7, 1921. Weight, 213.

No. 3—Repeated.

R	Elaterii	4 grains
	M. fiat. caps 25.	

January 24, 1921. Weight, 207.

February 7, 1921. Weight, 208.

Has been out of medicine since February 3. Gained

one pound. Is hard to keep under treatment; careless (in order to make an impression).

No. 4—

℞ Acid carbolica 10 gtt.
Tinct. asefetida 1½ ounces
Tinct. cinchona 1 ounce
Aynae simp. 1½ ounces
M. sig. 1 dram before eating to stop craving for food. To stop appetite.

February 24, 1921. Weight, 203.

No. 5—

℞ Elaterii 4 grains
Pilocarp. hydrochlor. 3 grains
Thyroid dessic. 1 dram
M. fiat. caps No. 30.
Sig. 4 a day.

March 15, 1921.

℞ Elaterii 5 grains
Pilocarp. hydrochlor. 4 grains
Thyroid dessic. 1 dram
M. fiat. caps No. 30.
Sig. 4 a day.

Case 2. Female; widow. Weight, 270. Occupation—Housecleaning, general work. Diagnosis—Obesity; very bad dyspnea.

December 13, 1920. Weight, 270.

No. 1—

℞ Elaterii 2 grains
Pilocarp. hydrochlor. 2 grains
Pulv. glycyrrhiza comp. 40 grains
M. fiat. caps No. 20.
Sig. 3 a day.

December 20, 1920. Weight, 250.

No. 2—

℞ Elaterii 3 grains
Pilocarp. hydrochlor. 3 grains
Thyroid dessic. 20 grains
Pulv. glycyrrhiza comp. 20 grains
M. fiat. caps No. 20.
Sig. 4 a day.

December 28, 1920. Weight, 241.

No. 3—

℞ Same as No. 2, except increased thyroid to 30 grains.

January 5, 1921. Weight, 240.

Got weak, had an asthmatic attack (is more scared than reality). Examination.

No. 4—

℞ Kalii iodid 25
Elaterii 18
Fl. ext. pilocarp. 24
Fl. cascara aroni. 15
Aynae cinnamoni qu.s.

add 120

M. Sig. Dram before meals and at night.

January 19, 1921. Weight, 235.

No. 5—

℞ Elaterii 3 grains
Pilocarp. hydrochlor. 2 grains
Thyroid dessic. 60 grains
M. fiat. caps No. 30.
Sig. 4 a day.

January 28, 1921. Weight, 230.

Continue as January 19—No. 5.

February 5, 1921. Weight, 224.

February 11, 1921. Weight, 220.

Total loss today, 50 pounds. Complains of being tired, weak.

No. 6—

℞ Tablet trit. No. 416 P. D. Co. (I. A. S.)
Sig. 4 a day.

℞ Continue as January 19—No. 5.

March 2, 1921. Weight, 221.

No. 7—

℞ Elaterii 3 grains
Pilocarp. hydrochlor. 2 grains
Thyroid dessic. 1½ ounces
M. fiat. caps No. 30.
Sig. 4 a day.

March 12, 1921. Weight, 219.

℞ Continue No. 7.

March 28, 1921.

℞ Continue No. 7.

Sig. 3 to 4 a day.

April 7, 1921. Weight, 208.

P. 72. Sitting, feels good, works.

℞ Continue No. 7. Three a day. I. P. C.

P. S.—This paper was read April 14th, 1921. Patient then weighed 204 pounds; she was present at the time of reading this paper and examined by a number of physicians. Paper read at the Stock Yards Branch of the Chicago Medical Society.

SEEING AND BELIEVING IN THE DIAGNOSIS OF SMALLPOX.*

ARCHIBALD L. HOYNE, M. D.,
CHICAGO.

There is probably no disease in which the percentage of diagnostic errors is so great as it is in smallpox. This is not strange perhaps, for there is a very large proportion of physicians who seldom come in contact with this infection. And it is scarcely to be expected that one will readily recognize that with which he is not familiar.

During the onset of smallpox, which is nearly always abrupt and frequently ushered in with a chill or chilliness, followed by a rapid rise in temperature, headache and general aching pains that are often boring in character, the patient himself commonly makes a diagnosis. He believes his ailments are due to grippe or the "flu." Should a physician be summoned during this pre-eruptive period he usually confirms his patient's conclusions, and such a decision in nowise places the stamp of ignorance on the medical attendant, for it is not possible to make a positive diagnosis at this time. Furthermore, the symptoms presented commonly simulate those of

*Read before the South Side Branch, Chicago Medical Society, February 24, 1921.

influenza. Even a white cell count will fail to demonstrate a leucocytosis, though the temperature may range up to 105°, 106° or 107°. Nausea or vomiting are accompanying symptoms at this stage which may be expected and sometimes severe pain in the epigastrium as well. Cases in which the latter symptoms appear to dominate all others are sometimes regarded as of important surgical significance and a diagnosis of appendicitis or gall stones is then not rare. Or, when operation is resorted to, an exploratory laparotomy may be performed, though in the case of women a curettage seems to be the procedure of choice.

Epidemic meningitis, pneumonia, typhoid fever and malaria are other diseases which, from time to time, are unjustly blamed for the suffering that a patient endures when stricken with smallpox.

The prodromal symptoms referred to persist, as a rule, for about three days, and their severity or mildness is not indicative of the intensity of the eruption which is to follow. By the morning of the fourth day usually (except in confluent cases), all alarming symptoms have subsided and the temperature, which may have had an elevation of 5 or 6 degrees the night previous, will be found to be normal or even slightly subnormal. In numerous instances the patient feels practically well and may return to his work and customary habits. If he has doctored himself with internal applications of alcohol and possibly a small amount of quinine he is at once convinced of a great achievement and ready to believe that as a physician he might have startled the world. On the other hand, if the sufferer, driven to distraction by intense frontal headache, high fever, aching bones and possibly gastro-intestinal symptoms, concluded to call a physician for fear that one more death might be credited to influenza, then there is the opportunity for that physician to gain the very highest esteem of his patient so long as medicine of some description has been prescribed, for by the fourth day, as previously stated, the symptoms have subsided. The patient expresses his gratitude to the doctor for such remarkable ability to choose so effective a remedy, and the doctor himself, though sometimes surprised at the splendid results acquired, is inclined to view his patient as a man who possesses a great

deal more intellect and discernment than was hitherto manifest. However, the physician's laurels may be short lived when the smallpox "develops" following the wonderful recovery from the "flu."

At about this period then, the fourth day of the disease, the eruption actually makes its appearance, though frequently unnoticed by the patient or even by the physician unless diligently sought for. Yet oftentimes, although the patient may steadfastly maintain he did not break out on the day his symptoms deserted him, still he will frequently admit that he did acquire a sore throat about that time. And a sore throat in smallpox almost invariably means an eruption on the mucous membranes. Cases in this stage of the disease are occasionally admitted to general hospitals as tonsillitis patients, with the intention of having tonsillectomies performed after the acute condition is cleared up.

An error in the diagnosis of smallpox during the pre-eruptive period is at all times pardonable, but when the disease is prevalent it is always well to make a mental note of your patient's vaccinal status during a physical examination, this sometimes proving of suggestive value when obscure symptoms are encountered.

After the appearance of the eruption in smallpox, there is not the same degree of excuse for errors in diagnosis and yet mistakes are nearly as numerous as during the prodromal period. One of the commonest faults in this connection is making a diagnosis on the patient's history. It is my belief that such a method is improper in any eruptive disease, and especially so in smallpox.

Some people are just natural born foreigners in so far as truth is concerned; others forget very readily all their suffering, though smallpox patients of this latter type very often recall it again after they reach the Isolation Hospital and are given sufficient time to reminisce. Still other individuals, such as Christian Scientists, are frequently unwilling to admit that any real pain or ailment has actually existed, though there may have been "a belief," which, however, is not confided to you. So it is often useless and a waste of time to question a Christian Scientist regarding symptoms. Simply look at the eruption carefully, and if it is smallpox, you are

entitled to have a "belief" regarding recent subjective symptoms.

To anyone having some familiarity with smallpox it is usually a simple matter to determine the day of eruption, the day of onset and frequently the day of exposure, without receiving a word of information from the patient or anyone else. Not rarely, too, the general occupation or habits of the patient can be surmised by some special distribution of the eruption.

In any event, the diagnosis of smallpox should be made on what you see and not on what the patient would have you believe. Over and over again a physician, when called to see a case of smallpox, decides at first glance on the nature of the eruption, but then allows the patient to talk him out of his primary conclusion. The man states he has not been ill, and so the physician reasons the eruption cannot be smallpox, even though it does "resemble it." Further questioning may elicit such information as "I break out this way every year," or "an alcoholic celebration always causes an eruption of this kind." If the patient has taken quinine for a "cold," then, of course, the diagnosis is a drug rash.

But chickenpox is the disease most commonly confused with smallpox in the eruptive stage. Consequently if every physician could actually diagnose chickenpox, he would seldom be perplexed by smallpox. One of the chief errors in this connection is in thinking that a smallpox patient should be very ill during the first few days of the eruption and that a chickenpox case should not be, whereas the reverse should always be expected, except where confluent smallpox is concerned.

Measles, German measles, scarlet fever, pustular syphilis, ulcerative endocarditis and glanders, as well as various drug rashes have caused confusion. Impetigo, furunculosis, pustular dermatitis, acne and insect bites may sometimes come under consideration in a differentiation. Generalized vaccinia is always a dangerous diagnosis to make in a patient who, though possessing an active vaccination, is known to have been exposed to smallpox previous to the date on which vaccination was done.

To one with little smallpox experience there is no single point more valuable in the diagnosis than the distribution of lesions, and yet this, like

most signs, is not infallible. In the ordinary discrete cases the lesions predominate on the head and extremities. The face, hands and feet may be chiefly involved, while the trunk is relatively free. Although the eruption usually makes its appearance first on the forehead or face, sometimes its occurrence is noted about the genitalia before being observed elsewhere. Oftentimes no lesions develop in the palms of the hands or on the soles of the feet. Moreover, in chickenpox, lesions in these latter locations are quite frequently met with, especially where the subjects are infants or young children. Therefore, the idea, which seems quite prevalent, that an eruption on the palms or soles is an important diagnostic point favoring smallpox should not be given too much weight. An eruption on the mucous membranes of the mouth and respiratory passages may also occur in chickenpox as well as in smallpox.

Smallpox lesions are, of course, deep seated. They have the appearance of being in or beneath the skin, not upon it like varicella lesions. Furthermore, they require longer to develop and in the typical case seldom reach their maximum size before the eighth day of the eruption. On the other hand, chickenpox lesions which appear in crops, pass through all the various stages of macules, papules, vesicles and crusts within 36 hours as a rule.

During the year 1920 there were 166 smallpox patients admitted at the Isolation Hospital. Of this number but 6 had ever been successfully vaccinated, if one doubtful scar is included. The intervals between time of vaccination and the attack of smallpox in these cases were as follows: 62 years, 48 years, 50 years, 40 years, 37 years (atypical scar) and 10 years (doubtful scar).

Among the 166 patients there was but one confluent case. This was an unvaccinated white woman who eventually recovered. The original diagnosis in this case before admittance to the hospital was at first influenza and later scarlet fever. There was one death during the year. This latter occurred in an unvaccinated white man who was sent to the hospital from without the city limits. He had hemorrhagic smallpox and died within a short time after being received by the hospital.

25 East Washington St.

BLOOD TRANSFUSION.

RALPH KING, M. D.

OLNEY, ILL.

Historically, blood transfusion is as ancient as the history of medicine itself, but scientifically England is said to justly claim to be the native land of its origin. The early Egyptians and Hebrews previously practiced transfusion. The Italians and Germans in the 15th century made unsuccessful attempts to bring transfusion into prominence as therapeutic measure.

Following Harvey's discovery of the circulation, Dennys, professor of physiology of the Mt. Pelier school, succeeded in restoring, by transfusion, dogs which had been bled to death. With his surgical colleague, Emmeretz, they did a transfusion on a boy in a state of stupor and somnolence, in consequence of a fever of long standing, with favorable results. These men were severely antagonized by the Parisian faculty which led to the abandonment of further activities along this line for many years.

In the latter part of the 17th century Richard Lower, professor at Oxford, and Robert Boyle, president of the Royal Society of London, gave us the first authentic scientific document on the operation for transfusion of blood. The different operations succumbed later in England and also in France, where the same work was also being carried on.

After a silence of one hundred years England once more awakened to the possibilities at this time of the procedure being used in the treatment of rabies and Darwin in 1796 advised it for cases of fever, stricture of the esophagus, stomach and inanition.

A sleep of nearly a quarter of a century ensues until it was again awakened by Blundell in 1820, who was activated experimentally by witnessing the death of a woman from postpartum hemorrhage. He undertook experiments upon animals and found that the passage of blood through an apparatus did not render it unfit to perform vital functions, but if the blood remained longer than three seconds in contact with the apparatus or air it always had fatal results upon the animal that received it. He subsequently attempted transfusion on men and after two failures succeeded in saving life in many cases of hemorrhage. His process was simply to receive the

blood that flowed from the blood giver's arm into a conical glass and to next inject it into the recipient's arm taking precautions to prevent air embolus and clotting.

On comparing and examining the works of various authors on transfusion this operation is found to have been the means of saving life from 1820-1875, in at least eighty cases of women on the verge of death from post-partum hemorrhage.

In 1864 Rousell formulated the following axioms for successful transfusion:

1st. That the blood of the same animal species should be used and also from the same organic source.

2nd. That it should continue to be vital and unaltered in its most intimate composition, not having been subjected to contact with air or any other modifying material and that it should have lost neither its motion, temperature, gases or density.

3rd. That the quantity to be transfused and the rapidity of flow should be subject to the discretion of the operator.

4th. That the operation should be conducted without danger to either subject.

These axioms of Rousell were held vital until 1887 when Heward advocated the transfusion of defibrinated blood, but was practically ruled out by all the leading operators because of the intravenous coagulation which so frequently occurred.

Methods. The methods of transfusion are various but consist essentially of two, the direct and indirect. Modifications and differences in technique are almost as numerous as the operators themselves.

Direct transfusion as practiced by Dr. Crile of Cleveland consists in the anastomosis between the radial artery of the donor and any superficial vein of the recipient.

The artery is slipped over the vein, the latter being held patent by a glass cannula inserted into it. This completes the anastomosis. In cases transfused for profound shock or hemorrhage the transformation of the face is a most striking phenomenon, consisting of a gradual obliteration of the pale haggard facies and a substitution of a fuller, more rounded pink coloration of glowing health. In the donor after from twenty to forty-five minutes of continuous flow from the radial artery in a good anastomosis a gradual pallor of the extreme points, such as the

nose, ears and finger tips, may be noted. The transfusion should, therefore, be terminated as soon as the donor shows irregular respiration or sighs, is a bit uneasy or presents the characteristic facies.

The earliest and most constant change noted in the recipient is the almost instant and continuous rise in the blood pressure continuing up to a certain point, the total rise depending upon the physical state and the quantity of blood transfused.

The indirect method is performed in many ways, the essential characters of the procedure being the withdrawal of the blood into a receptacle and then transferring it to the vessels of the patient. Dr. Percy of Chicago, who is one of the foremost operators in the field of transfusion, uses a glass tube lined with paraffin as a receptacle. The arms of both donor and recipient are prepared as for a surgical operation. Constrictors are placed around each just below the axilla. It is best to use a separate set of instruments on different tables for donor and recipient in order not to transmit infections.

An incision is made under local anesthesia over the basilic vein just above its junction with the median basilic and a ligature placed about the vein in its proximal portion in the donor and in its distal portion in the recipient. By means of suction through a rubber tube attached to the glass receiver venous blood is withdrawn up to the required amount. After removing the tube from the donor the cannula is placed in the vein of the recipient and the constrictor released.

The advantages of the indirect method as given by Dr. Percy are:

- 1st. Known quantities of blood are transfused.
- 2nd. 600 cc. can be given in from seven to ten minutes from time the cannula is inserted into the donor.
- 3rd. Venous blood is utilized so that the arteries, such as the radial, are not destroyed.
- 4th. Transfusions may be made without contaminating the donor with the blood of the recipient.

5th. No air comes in contact with the blood, thus lessening the liability of the clotting.

Judgment of the amount of blood to be transfused will depend on the size, weight, age, physical condition of the patient, the type of disease to be treated, the object to be gained by trans-

fusion, the presence of other complications and lastly experience.

The average amount is between 300 and 600 cc. The quantity that can be withdrawn from a donor varies. The amount to be transfused may be decided arbitrarily with regard to the donor's ability to give up blood. It is always safe to take one-fourth of the donor's blood and even possible to take as much as one-third of the donor's blood volume, provided the transfusion is not done too rapidly.

A simple arithmetical formula is given by which it is possible to calculate how much rise in the percentage of hemoglobin will be obtained by transfusion of a given volume.

The formula is: Patient's blood weight X patient's hemoglobin percentage + weight of blood transfused X donor's hemoglobin percentage = hemoglobin percentage reached.

The recuperative power of a healthy donor is quite remarkable. This power is greater after the first transfusion and gradually less rapid in succeeding transfusions. Furthermore, after successive bleedings, while the blood picture may be normal, there may be a little loss of tissue weight. The loss in weight is in all probability a compensatory process.

Indications. The recent developments of Carrel, Crile, Guthrie, Elsberg and others in the suturing of blood vessels and mechanical devices for a rapid, simple and safe technique for the transfusion of blood have put into our hands a measure of undoubted therapeutic value.

Indications for the transfusion of blood may be considered from a physiological and clinical standpoint. It is indicated physiologically when the blood is greatly deficient in quantity or quality, clinically when the blood cannot perform its functions of carrying materials from one point to another, or is not able to nourish the blood forming organs so that they can produce corpuscles.

The clinical indications may be divided into four classes:

- 1st. Acute grave anemia due to hemorrhage.
- 2nd. Chemical changes in the blood.
- 3rd. Deficient coagulability of the blood.
- 4th. In certain blood diseases.

For anemia due to acute grave hemorrhage, as from accidents, post-partum and post-operative,

ruptured extrauterine gestation, perforated ulcers, etc., results have been excellent.

When chemical changes have occurred in the blood and the hemoglobin is not able to perform the interchange of CO_2 and O as in carbon monoxide poisoning, good results have been obtained.

In hemorrhage where the coagulability of the blood is deficient as in hemophilia, cholemia and in hemorrhage during typhoid, transfusion is indicated. In hemophilia it will assist coagulation and with the other methods of treatment stop the hemorrhage but of course not cure the underlying cause. In cholemia transfusion will increase the coagulability of the blood and make it possible to operate without excessive hemorrhage.

Transfusion is of inestimable value in certain blood diseases where the blood-forming organs are not sufficiently nourished to produce and corpuscles are deficient in number as in extreme chlorosis and secondary anemia.

In pernicious anemia good results have been obtained especially if associated with splenectomy.

Transfusion has been used in the following conditions with value in most cases:

- 1st. Chronic hemorrhage as in:
 - Chronic gastro-intestinal hemorrhages.
 - Intractable post-operative hemorrhages.
 - Melena neonatorum.
 - Purpura.
- 2nd. Leukemias.
- 3rd. Debility due to:
 - Carcinomata.
 - Chronic suppurative conditions.
 - Tuberculosis.
 - Diabetes.
 - Pellagra.
- 4th. For the transference of immune protective bodies.
- 5th. In the treatment of shock or impending shock.
- 6th. To lessen toxemia as after strychnine poisoning and diphtheria.

Contra Indications. Transfusion should not be resorted to when the patient is in extremis. Preliminary tests and examinations should be made on the donor to determine the presence of lues, tuberculosis or signs of a recent infectious disease. The blood should also be examined to ascertain if hemolysis or agglutination takes place, in which case the use of this blood is contra-indicated.

Hemolysis or agglutination of the donor's blood cells by the patient's serum or vice versa can be absolutely excluded by preliminary blood

tests. Many fatalities and accidents are thereby avoided.

The relation between the test tube hemolysis and intra vascular hemolysis is close and it seems likely that in all cases in which there is test tube hemolysis some intravascular hemolysis results.

The symptoms of hemolysis occurring during or after transfusion are:

Sudden onset of peculiar feeling over entire body and pain low down in spine radiating posterior.

Chills and vomiting.

Peculiar biuret pink flush of whole body.

Profuse sweating.

Respiratory distress.

Later, peculiar icteroid tinge to skin.

Urticaria may appear.

The reaction from a blood relative in most instances is less than from an alien, yet the blood of many aliens may be as congenial as family blood. In a series of sixty-two cases reported by Lindeman in which alien blood was used, chills occurred in twenty-two instances and a rise in temperature in twenty-six. Hence practically in fifty per cent. of the cases in which alien blood was used the mixture proved as good as that of a relative.

In the remaining fifty per cent. of the cases no untoward effects occurred in any but three cases save the chill and temperature reactions, but in three cases hemolysis occurred from which the patients recovered. It should be borne in mind, however, that hemolysis can occur with family blood. Providing the same donor be used there is frequently no reaction after the second and succeeding transfusions, and if any reaction occurs it is usually mild.

The occurrence of agglutination between the blood of the donor and that of the patient need not be regarded as any absolute contraindication to the transfusion but non-agglutinative donors should be chosen whenever possible. In selecting donors with regard to agglutination, cases in which the donor's cells are agglutinated by the patient's serum are more important to avoid than the reverse.

The majority experience no noticeable reaction with the exception of the few cases which react with a chill and temperature. Symptoms and accidents which may arise or result from transfusion other than hemolysis or agglutination are:

Dilation of right heart.

Jaundice.

Embolism.

Thrombosis.

The favorable results of transfusion are both transitory and permanent. The amount of the hemoglobin is markedly increased but does not always correspond to the quantity injected.

Estimations should be made just before the injection and again in one to two days to determine the increase. The rise of hemoglobin percentage is greatest within the first twenty-four hours after the injection and it then gradually falls during the next few days. Repeated transfusions may gradually increase the amount of iron in the hemoglobin though the primary increase and secondary decrease of the hemoglobin is repeated after each injection.

There is a marked improvement of the color of the skin and mucous membranes after each injection. There is an increased freshness of appearance, increased muscular energy and better appetite and sleep. There is not only an increase in the fluid quantity of the blood but an actual transplantation of blood cells.

In conclusion, with the proper technique in the hands of a competent operator transfusion is a safe procedure. With the necessary indications, in the absence of contraindications and with a selected donor transfusion is of inestimable therapeutic value to the medical profession.

DIABETES INSIPIDUS*

H. A. CABLES, M. D.

E. ST. LOUIS, ILL.

I feel that I should begin this paper with an apology, but believing that a limited personal experience within a somewhat limited field might add something to our knowledge of a condition that is little understood must be my excuse.

The characteristic features of this condition are persistent polyuria of low specific gravity and great thirst. It is always chronic. Inasmuch as the true nature of the disease is unknown we are probably in error when we classify the symptom complex as a disease *per se*.

Dietrich Gerhardt thought there was an idiopathic type due to the functional disturbances of the kidneys and E. Meyer sought to prove this by functional tests. A normal person with healthy kidneys if placed upon a standard diet of constant content in water, nitrogen and salts, will,

in a few days, pass a urine constant both in amount and concentration. If to this standard diet to this normal individual protein or sodium chloride be added there will be an increase in the concentration of the urine the following twenty-four hours with but little varying in the total amount. When protein and sodium chloride are added to the standard diet of a case of idiopathic diabetes insipidus the reaction is entirely different. Instead of an increase of concentration representing the increase of solids there is a marked increase of the total quantity with little or no increase in concentration. In other words the excess of solids is removed by increase of the amount of water rather than of the increased solids. Says Barker, it is to be noted that we have to deal with the total concentration of the urine, not with its contents in any single solid substance; it is the osmotic functional capacity that is involved, not an elective secondary function for any single solid or group of solids.

On the other hand, Forschbach and Weber suggest that diabetes insipidus may be due essentially to a primary increase in the output of water and that the low concentration is a secondary manifestation. While the concentration of the urine is low it is not fixed and may be made to fluctuate by restriction of liquids and the salts of urea given. In this way the specific gravity may be raised to 1020 or more. While the withholding of liquids will cause slight concentration of the urine there is a retained concentration in the blood of solids and if water starvation is too rigid or for too long a time this blood concentration causes a condition closely resembling uremia.

Investigators have also demonstrated that injuries to the brain, notably at the base near the floor of the fourth ventricle, is followed by polyuria. Jungman showed that the nervous polyuria, induced either by puncture of the medulla or section of the splanchnic nerve, is associated with an increased concentration and elimination of the sodium chloride. This also holds true of that long list of nervous lesions characterized by polydipsia and polyuria. Of the pathology nothing can be said because so far nothing has been found. Yet there is a group of cases in which I believe pathological changes will be found in the pituitary gland.

The symptoms that are almost characteristic

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of the disease are polydipsia, polyuria and low specific gravity. The most important conditions to be differentiated from diabetes insipidus are polyuria following typhoid fever, hysteria, and interstitial nephritis. In the case of typhoid the other symptoms will clear up the cause. In hysteria the polyuria is not constant and other symptoms of hysteria will soon determine the nature of the trouble. In interstitial nephritis the amount of urine is not so much as in diabetes insipidus, its specific gravity is usually higher and without exception it contains albumin and tube casts, but most important of all there will be cardiac hypertrophy and signs of arterial sclerosis manifested by increased blood pressure. The prognosis is always good and the disease extends over a long period of time.

At this time I wish to report three cases coming under my care the past year.

CASE 1. Mrs. M., aged 35 years, married, two children. Had childhood diseases except scarlatina and diphtheria. Two sisters died of tuberculosis, grandfather probably of the same. Parents are living and healthy. No diabetic history. Says that at the age of twelve she first remembers noticing frequent micturition and that it interfered so with her school work that it was with difficulty she was able to finish high school. A 24-hour collection measured eight and one-half quarts; specific gravity 1001, no albumin or casts. NaCl normal. Lungs negative; heart normal in size and blood pressure not increased. Appetite and digestion good. Fluid intake equal to output.

CASE 2. Mrs. I., aged 25 years, married; tubercular family history; no illness except 12 years ago she had measles and since then she has had a polyuria. Unable to leave home owing to frequent micturition. Heart and lungs normal, no arterial changes; urine 8 quarts, slightly acid in reaction, specific gravity, 1002; no albumin or casts.

CASE 3. Mrs. J., aged 33 years, married. Mother has mitral and tricuspid insufficiency. Otherwise family history good; four brothers and two sisters, all in good health. Twelve years ago patient had scarlatina, from which she dates present trouble. Urine 7 quarts, faintly acid, 1002; no albumin nor casts; no cardiac hypertrophy, blood pressure normal.

Each of these cases were put upon desiccated pituitary gland (whole) and the relief was immediate and so far has been permanent. With a decrease of the polyuria there was a corresponding decrease of thirst with an increase of urinary concentration to that of the average normal individual.

PREVENTION OF DEFORMITIES OF THE EXTREMITIES*

A. B. McQUILLAN, M. D.

E. ST. LOUIS, ILL.

The examinations of the War Department for entrance into military service, emphasized the fact, that there was very frequently a lack of the complete proper treatment of soft parts, bone, and joint injuries, with a resultant deformity that was preventable.

Frequently we see such injuries treated in the most scientific manner, with the exception that a deformity is not guarded against, and consequently a loss or impairment of function. The orthopedic surgeon has always taught and laid great stress upon the prevention of deformities, and that the future function of the injured member must be one of the primary considerations from the inception of the treatment. We general surgeons and practitioners too often consider the faultless operation and perfect healing, and yet fail to apply the proper dressing or splint, or to place and maintain in place the injured member in the position that will give the greatest future function, with the result that after the healing we have a deformity or impairment of function.

It is not enough in a given injury to endeavor to have the injury heal in the shortest possible time and with a minimum of discomfort, but the function of the injured part must be appreciated and wherever possible a permanent disabling deformity prevented, and if a permanent disability is not preventable, then the surgeon should not only endeavor to effect a cure, but a cure in the position best suited to secure the greatest function, most frequently considered with reference to the patient's occupation. In injuries to the soft parts the muscles should be kept relaxed, and frequently only proper splinting will accomplish this. In this way the muscle tone is preserved, cicatricial tissue is diminished, as are also the adhesions. In injuries to nerves, the muscles supplied by the injured nerve must be kept relaxed and until the nerve is again functioning, because a nerve for the process of regeneration must not be under tension, and the op-

*Read at the 46th annual meeting of the Southern Illinois Medical Association, held at Carbondale, Ill., Nov. 4-5, 1920.

posing muscles with their constant pull will very soon destroy the muscular tone of the enervated muscles.

Contractures from burns, loss of tissue, tendon inflammations and wounds, and all conditions where adhesions might form must be guarded against by proper splinting and dressings. However, only too frequently a condition is present, such as an intra-articular fracture, infection of the joint, arthritis or loss of substance, which will certainly, or in all probability, cause an ankylosis, complete or partial, or a limitation of motion which, if in the process of healing the position of selection is not secured, will result in loss of function.

It is a most common practice to treat infections and injuries of the shoulder joint by carrying the arm by the side in a sling or splint. Should an ankylosis result, for general purposes the arm would be limited in many of its uses. It is only necessary to recall the mechanism of abduction to appreciate this. Abduction of the arm at the shoulder is initiated by the supra-spinatus muscle, which not only begins the movement but fixes the head of the humerus in the glenoid cavity for the action of the deltoid, which accomplishes abduction up to ninety degrees. Further abduction is induced by the action of the muscles of the shoulder girdle action on the scapula. Consequently with an ankylosed shoulder joint or adhesions of the adductor muscles with the arm at the side, very little use could be made of that arm. The position of selection is abduction of arm fifty or sixty degrees, the elbow slightly in front of the coronal plane of the body so when it is at right angles and the forearm supinated, the palm of the hand is toward the face.

The arm is placed in this position while the scapula is at rest to secure the full rotation of the scapula. In this way the hand can be brought to the mouth, pockets reached, hair brushed and many daily acts accomplished with little inconvenience.

Injuries of the elbow frequently ankylose and the position of election gives a very serviceable arm. If a single arm is involved the arm is placed at a seventy-degree angle, which is just below a right angle and which has always been considered the angle of selection. But it is frequently advocated, and I think with justification,

that the arm be placed at a sixty-degree angle for the following reasons: If there is to be any change in the position of the elbow, which is not infrequent, it will be in extension, which is accounted by the influence of the constant weight of the forearm and by the pull exerted in the direction of extension. Also, if it remains permanently at a right angle, a serviceable arm is secured. If both arms are involved, the second should be placed at an angle of one hundred or a hundred and ten degrees. Any position beyond a hundred and ten degrees will, as the degree increases, progressively impair function.

Another frequently overlooked deformity which is likely to occur following injuries and inflammations in and around the elbow joint and which would mitigate most of the good results of the elbow having been properly treated, is the pronation deformity of the forearm. The forearm synostosed or ankylosed in the position of pronation is a weakened arm for lifting and is an arm incapacitated for holding or receiving articles. In fractures of the shafts of the radius and ulna, the position midway between pronation and supination is advised, because the bones are farthest apart and the liability to synostosis lessened. But in injuries about the elbow it is not a question of a synostosis, but of the head of the radius, its neck or the bicipital tuberosity becoming fixed in the callus. Should this occur nothing but an operation will in any way improve the arm. Therefore, to forestall an operation to which the patient may object, the position must be assumed that, should ankylosis or synostosis occur, the patient will have a useful forearm. This position should be in almost full supination unless, for specific reasons, such as vocation, training, habit, etc., for if it remains fixed absolutely, all functions can be performed, for the loss of pronation is partially compensated by the internal rotation of the humerus at the shoulder joint, and any change of position will be in the direction of pronation.

A priceless surgical axiom, the neglect of which is grave, according to Sir Robert Jones, is the neglect to treat all wrist joint cases in dorsiflexion, being an urgent necessity where ankylosis is expected or where even limitation of movement is liable to occur. The common deformity of palmar flexion occurs when no splint is applied or from the use of a straight splint. In all cases

in which the arm and fingers are kept on such a splint, palmar flexion may occur, and this condition is a lifelong handicap. The grip of the fingers is diminished if the wrist is palmar flexed. The strong flexors overpower the extensors of the fingers and proper co-ordination of the finger movements are impaired. The grasp of the hand is strongest when the hand is dorsiflexed, the balance between the flexors and extensors preserved, and the co-ordinated movement of the fingers secured. A flexed wrist is a very unsightly deformity.

Hip joint ankylosis should be in a position of slight abduction with full extension of thigh and very slight external rotation. The common deformity is flexion, adduction and internal rotation, which leads to a lumbar lordosis and bad limp. Adduction deformity brings the limb too near the middle line, interferes with the sound limb, thereby involving abduction of the sound limb and also interfering with a free gait. If the limb is not slightly rotated outward the patient rises on his toes when walking, due to the immobile condition of the hip joint and the tilting of the pelvis. External rotation of the femur points the toes outwards which makes walking much easier than when the toes are pointed forward.

The knee should be fixed in full extension. In selected cases, on account of convenience, occupation or appearances the knee may be slightly flexed. If slightly flexed it is somewhat easier to walk upstairs and to sit down, but ankylosis is not always bony, and when fibrous the tendency is for the flexion to increase by weight bearing. Frequently a weight bearing joint with a slight degree of motion is a painful joint. Even with bony formation the process of consolidation is slow, and frequently the reflexion becomes greater than one would wish. So a completely extended knee, with increased strength and stability, will generally outweigh all other considerations.

The foot should be kept at a right angle with the leg so when the member is put to functioning the sole impinges on the ground in a slightly varus position instead of a valgus, and also that contraction of the tendo Achilles is prevented. A foot in valgus is conducive to a weak foot and all the disabilities associated with deflection of body weight. Nothing is more disabling for loco-

motion and comfort in that act than a painful foot.

In injuries of the tarsus and metatarsus, the deformities to be guarded against are the common static deformities of a flat or pronated foot, pronation of the middle tarsal joint, flattening of the longitudinal arch and frequently of the transverse arch, associated with pain in the metatarso-phalangeal joints and usually callus exudation added to the plantar malposition, resulting in a very disabling foot. During the healing process and especially in the later stages, great care should be taken not to bandage the foot too rigidly against a flat foot piece, for if that be done every irregularity of bone will conduce to a callosity when walking is resumed. It is necessary to adjust a splint having an inside arch padded to conform to the shape of the foot, and the hollow of the foot should be emphasized when possible. Eversion of the foot should be strongly guarded against. When walking is resumed a Thomas heel should be put on the shoe and if the metatarsals involved, a bar should be placed across the sole of the shoe behind the tread. Along with the general treatment, when possible, physio-therapy in its various branches, heat, light, massage, ionization of scars, electricity, hydrotherapy, etc., used intelligently and as demanded in each case is a very valuable adjunct and aids materially in lessening or prevention of a permanent disability.

First National Bank Building.

DIAGNOSIS AND TREATMENT OF URETER OBSTRUCTION*

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Ureter obstruction may be partial or complete and due to causes within or without the ureter; stone is the most frequent cause acting within the ureter, but pus detritus, blood clots, pieces of tumor tissue, etc., may all operate as causes. Ureter strictures, both real and spastic, are frequent causes and often determine the point of lodgment of stones or other particles passing through the tube. The three normal points of anatomical narrowing of the tube (just below the uretero-pelvic junction, where it crosses the iliac vessels at the brim of the bony pelvis, and at its

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entrance into the bladder) likewise often determine the lodgment of stone, as does the exit from the relatively roomy renal pelvis into the ureter as a tube.

Ureters kinked over an aberrant renal artery, or by a floating kidney, or from other causes, produce obstructive conditions.

Causes acting from without the ureter by pressure consist of tumors, the pregnant uterus (as in pyelitis of pregnancy), enlarged calcareous glands in the mesentery of the colon, adhesions, etc.

The onset may be gradual, without colics or other prominent symptoms, but depending on the more or less abruptness and completeness of the blockade, most cases suffer acute renal colic attacks, usually centering in the region of the kidney or laterally above the iliac crest; or the intensity of the pain may early localize at a lower level in the course of the ureter, being felt in the front or lower abdomen and is particularly apt to be felt at progressively lower levels along the course of the ureter as a stone moves downward in its course to the bladder, the pain subsiding when the stone becomes quiescent and appearing again when the stone advances.

Patients present themselves to the physician because of some particularly leading symptom. This may be the one prominent of several symptoms, or the only one noticed. Abdominal patients present themselves usually because of the prominence of one of six frequent leading symptoms: stomach trouble, pain, urinary disturbances, vomiting, tumor mass and hemorrhage. Each hollow organ produces its own more or less characteristic syndrome when it cannot empty, giving rise to the several types of colicky pains observed about the abdomen; some of these colicky attacks are initiated very abruptly and pursue an exceedingly stormy course until relieved by treatment, by the disappearance of the cause, or by the relaxation from vomiting as often occurs in gall bladder colics.

Renal colic is particularly noted for its sudden and severe onset and for its stormy course. This pain when well developed probably produces the most intense suffering of any of the pain-producing abdominal diseases. These various acute colicky attacks (gall bladder, renal, intestinal, appendiceal, etc.), together with the associate and follow-up symptoms, are usually largely

typical of their type in each instance, but irregularities of type frequently occur; the typical of any syndrome-type is not difficult of understanding by the observing clinician but the atypical types are productive of many distressing diagnostic errors and should always be kept in mind.

Some of these cases do not suffer the typical colics but rather a more or less subacute or chronic type of fixed pain over the kidney region or along the course of the ureter. Those with fixed pain and soreness at McBurney's point from lodgment of a stone at the brim of the pelvis are often clinically mistaken for appendicitis. We see several such cases each year simulating cycles of appendicitis in which the cause is found to be one or more stones lodged in the right ureter about the pelvic brim—in one case five stones in a row.

In their acute onset some of these cases because of the epigastric intensity of the pain with vomiting, simulate the acute surgical abdomen, especially in children; with severe obstipation and marked abdominal distension added to the epigastric or general abdominal pain with vomiting, the condition simulates one of intestinal blockade. In some of these cases of subacute or recurrent type the pain is largely if not entirely in the bladder or rectal region, particularly when a stone is lodged in the lower end of the ureter or becomes intra-mural in its location. In many subacute and chronic cases of ureteral obstruction the fixed pain is at the sacro-iliac joint, simulating a strain syndrome of that joint; and frequently in the back as a kidney ache, a backache or a lumbago.

Dr. Kolischer recently reported the case of a man who had suffered severe rectal pains and distress for many months—perhaps over a year. In the meantime he had had a rectal operation—hemorrhoidectomy, etc.—without relief, and finally under Dr. Kolischer's care, a stone was removed from the lower end of the ureter, curing the rectal distress and backache.

Several years ago we removed two bladder stones weighing two drachms each from a child of four and one-half years—in whom symptoms had been present since six months of age, and had consisted of severe cycles of rectal tenesmus, pain and prolapse, the child crying much of its time for two or three days and nights at each recurrence, these recurrences coming two to six

weeks apart. There were apparently no symptoms during the intervals, and a few months before we removed the stones, its trouble was diagnosed by a children's specialist of reputation as rectal prolapse, after two weeks' hospital study, and operated accordingly by a surgeon of equal prominence—all without benefit of course. A bimanual rectal-abdominal examination under a little anesthetic, with the child's bladder empty, showed the stones nicely, a diagnostic procedure easily within the reach of any general practitioner.

Having carefully studied the type of the pain symptoms we next look for confirmatory urinary disturbances, of a chronic more or less continuous, or of an acute or subacute more or less recurrent type, associated with the acute attacks. Very few cases have remained free from noticeable (usually troublesome) urinary disturbances, especially in connection with the attacks, frequently to such an extent that these are complained of as the leading symptom.

These disturbances may vary from very slight deviations from the normal, during the attack only, to storms of frequency, tenesmus, etc., of a more or less chronic or recurrent type; polyuria may follow the colic attack or remain present as long as a stone is lodged in the ureter. All cases of abdominal pain attacks should be interpreted closely in their urinary history.

Physical examination then seeks to establish tenderness about the renal region by first percussion and pressure, bimanual and otherwise; and also along the course of the ureter, and to exclude the presence of tumor masses and causative or concomitant findings in other viscera—as well as to note all constitutional symptoms present.

Urinary study is the next (and sometimes the first) source of definite diagnostic findings, pus and red blood cells being of very suggestive importance, though a diagnosis of Bright's disease should not necessarily follow the finding of a little albumin. Before diagnosing chronic nephritis the collective findings of the cardio-vascular-renal system should be considered. In about fifteen per cent of cases the urine is negative on any one examination, about seventy-five per cent of these negative urines being associated with the ureter and twenty-five per cent with kidney stone cases.

Every family physician should be prepared regularly to make a complete analysis of the history and symptoms at hand, and to make a painstaking physical examination, as well as chemical and microscopical urinary studies, but a finished diagnosis will depend on further special study by the roentgenologist and urologist. Only these special studies may be depended on regularly to differentiate stone from other blockades.

The urologist will determine the condition of the bladder ureter mouths by cystoscopic study and by catheterizing the ureters with large (No. 6 catheters) determines largely the question of blockade, though in about one-fourth of the stone cases presenting themselves the catheter may be passed by the stone; it may also pass by many of the strictures as many of these are largely spastic in type, thereby more or less intermittent in their operation.

Catheter findings may be negative as often the blockading stone has passed. The catheter may be arrested too by an angle in the ureter, which may offer no resistance to the passage of the urine, but this difficulty will be overcome. Seventy per cent of lodge stones are found at or below the bony pelvic brim but most strictures are at the pelvic brim or near the kidney.

If a stone has recently passed, cystoscopic examination will frequently determine the injured, red lacerated ureter mouth left in its trail. If lodged intra-murally, the mass presents just external to the ureter mouth and if a large stone has thus ulcerated through, this lacerated, gaping wound will be seen.

X-ray study is very important in all these cases of ureter blockade, or supposed blockade—though it is not infallible. Many things besides a stone in the kidney or ureter may cast a suggestive shadow; thus calcareous lymph glands in the mesentery of the colon particularly may throw confusing shadows. Cabot reported two cases in which at operation such mesenteric glands had made sufficient pressure on the upper ureter to block it from without and the x-ray picture taken with the x-ray catheter in place showed the shadow and catheter so closely in contact that differentiation from stone inside the ureter could not be made. The removal of the gland at operation, however, corrected the blockade.

Eisendrath believes that calcareous gland

shadows are of an uneven density, rather than of an even density as renal and ureter stones are, which should be considered in the differentiation of the two. Phleboliths, fecoliths, and calcareous plates in arteries often cast a shadow. Gall stones produce rather a distinctive shadow,—being dense about the periphery and very light in the center. Bland's pills and bismuth masses in the intestine will cast a shadow, hence the intestinal tract should always be completely emptied.

Bony processes—the 3rd, 4th and 5th lumbar transverse processes especially—which the ureter crosses, are to be thought of in studying shadows. Furthermore other pelvic bones tend to elimination or confusion of shadows we may wish to see, as it is to be remembered some ureter stones are very small and cast very uncertain shadows.

The roentgenologist and the urologist need to work together to obtain reliable results. The mere presence of a shadow along the course of the ureter as shown in a picture is very unreliable. If this shadow is shown to lie in contact with the x-ray catheter then this fact becomes of diagnostic importance. To determine this fact stereoscopic pictures are much more desirable than one plain plate for study.

Kretschmer in 1916 suggested that two exposures be made on the same plate without moving plate or patient, but by moving the tube which will further tend to differentiate the extra ureteral shadows from those inside the tube, by showing the latter in contact with the x-ray catheter at whatever angle taken.

Finally, x-ray pictures taken with an opaque material (ten per cent. collargol, thorium nitrate, etc.), injected into the ureter and renal pelvis not only aid in showing the relationship of a supposed stone shadow to the ureter, but is the first procedure yet mentioned which will actually show the degree and extent of dilatation of the ureter or renal pelvis which is important knowledge in these cases of blockade.

Kummel a few years ago suggested that a silver solution be injected about a supposed lodged stone which by the stone's absorption of the opaque material tends to visualize an otherwise very indistinct shadow.

After all of these studies have been competently made by the roentgenologist and urologist working together, there will remain but few obstructive conditions in the ureter that will not have been properly interpreted. An extreme difficulty, however, is offered in those cases with colic, normal urine and a normal ureter mouth, with a shadow shown in the x-ray picture, yet the catheter cannot be made to enter the ureter.

The wax tipped catheter should be used in cases with symptoms suggesting stone, with normal urine, negative x-ray and an unobstructed ureter—(Cabot).

The one great source of avoidable error in these cases of ureter blockade—usually from stone—is that these special x-ray and urological studies are not made, or at least the latter are omitted, which renders the former entirely unreliable, even in the presence of shadows! Too many of these patients are operated on for other conditions before they are completely studied out.

Cabot found that of 153 ureter stone cases in the Massachusetts General Hospital, 26 had been operated on under a mistaken diagnosis, ten for appendicitis, eight abdominal explorations, four kidney flexions, etc. Of these 26 cases, 12 presented pain in the lower right abdomen as the leading symptom; 13 of the 26 had no renal colic attacks and 11 presented backache or sacro-iliac pain as the chief symptom—all more or less atypical in the pain syndrome, but were these cases completely studied by the roentgenologist and urologist these useless operations would have been avoided.

Bladder irritability and abnormal urine may be the only symptoms of a lodged stone and many cases present their only pain at the sacro-iliac joint.

Another source of error is the pain syndrome or root pains in cases of spondylitis, and spinal tumors, and in the abdominal crises of tabes. Nuzum a few years ago found 97 useless operations to have been done in 1,000 cases of tabes at the Cook County Hospital; of these, 7 were done for renal or ureter stone. Holmes has suggested that the hypodermic use of a few drops of adrenalin chloride solution will quickly relieve the pain crises of tabes, but will influence no other pain.

Treatment. Stone lodged in the ureter for any

length of time may cause secondary changes, dilatation, hydronephrosis, infective pyonephrosis, septic fever, etc., important considerations in the prognosis and treatment. Every lodged stone is a menace and should be dislodged or removed except in the face of positive contra-indications.

Most ureter stones will pass of themselves or by the aid of the urologist, who will dilate the ureter, inject oil, glycerin, papaverin, etc., above the stone and by actual operative work through the operating cystoscope when the stone is lodged intra-murally. Strictures should be dilated by repeated treatments, infections (pyelitis and ureteritis) cleared up by the local use of two per cent silver nitrate, or of organic silver solutions, etc. Focal infections often continue pyelitis and may need be removed.

The cure of ureter blockade—giving proper renal drainage is the first step toward the control of the pyelitis and ureteritis when present—and the control of these three factors is of the greatest importance in the control of stone forming tendencies. However, Ochsner maintains that the drinking of distilled water will entirely prevent further stone formation and that the free use of watermelon will sterilize the urinary tract.

Operative treatment of ureter stricture is reserved for those cases which the urologist cannot correct and the operative removal of stone is reserved for those cases in which the stone is entirely too large to pass; those in which the urologist has failed after diligent effort by competent methods to effect its removal, and in those cases having secondary local or general conditions demanding the removal of the stone without delay.

The operative treatment of these or other conditions obstructing the ureter is to be instituted at any time consequent to competent diagnostic study when in the judgment of the surgeon the gravity of the symptoms counsel against a continuance of non-operative methods, but the continuance of ureter blockade, especially by stone, is dangerous to the corresponding kidney and may precipitate conditions dangerous to the life of the patient. The important questions in relation to multiple or bilateral stones, the func-

tional capacity of the kidneys, the local or general damage from sepsis or other complications are all to be considered before operating, as well as the general condition of the patient otherwise as an operative risk.

The removal of the kidney and ureter or of their drainage is to be determined by the seriousness of the infective and other complications present.

The operative technic and approach to the strictures or lodged stones will be found described in the works on operative surgery; however, it is to be remembered that the ureter should be approached extra-peritoneally; that it clings to and is lifted forward with the peritoneum when the latter is peeled up; that if not dilated, or the stone large, its isolation is facilitated by the previous passing of the ureter catheter; that its exposure under the broad ligament, where stones often lodge, is rather difficult; that stones, though unable to escape from the ureter, may easily migrate upward out of the operative field, or escape entirely back into the renal pelvis, even from the bladder end, in greatly dilated ureters, from the influence of the Trendelenburg position, or from manipulation, and lastly that it may become necessary to open through the peritoneum into the abdomen proper, to locate and return such a "lost" stone to the operative field; however, intra-abdominal soiling is to be avoided by immediate closure of this portion of the wound or by other means. Ureter closure or drainage depend on the judgment of the operator.

The following case report of ureter stone is made because of several instructive points in connection with it, but particularly in relation to the size of the stone, the extreme dilatation of the ureter and the renal pelvis and the migratory excursions of the stone.

Mrs. R., aged 27 years, married three years and the mother of one healthy child born in October, 1919. Family and past histories negative except that she had scarlet fever, measles, and pertussis several years ago; good recoveries. Always strong and well, with a normal weight of 115; present weight about 100. Menstrual history negative. Entered the hospital on August 8, 1920, complaining of recurrent colic attacks in the left renal and abdominal regions radiating to the bladder region, with some soreness and occasional

pain in the lower left abdomen; there were some urinary disturbances.

Present illness began as an acute left renal region colic attack in November, 1916; the pain and soreness lasted two days, but she was in bed four days. The soreness was in the left lower abdomen, with some pain extending through to the back. She had an attack of urinary frequency, and she thinks of scant urine two or three years before this time, but without pain. She had her second and third colic attacks of like kind and severity before Christmas time, 1916. She had moderate urinary frequency with these attacks. She now seemed to recover completely and had no urinary disturbances until in March and April, 1920, when she had three or four light left abdominal colic attacks, each lasting one-half hour or so; she seemed normal between attacks, but on May 1, 1920, she had a very severe attack, the pain lasting several days; she had much soreness in the lower left abdomen and a sacro-iliac pain lasting three weeks.

She was kept in bed on the doctor's advice. She had had a few chills and some fever; she had three more light attacks and then on June 22 had another hard attack with a few chills and then had some fever each day more or less continuous. After this last attack lower left abdominal pain and soreness was troublesome for ten days, then much of the time after that she was free from pain, always having a little soreness on pressure, but in general felt rather well, voiding urine once or twice at night and about three hours apart in day time, but with these severe attacks she always had acute urinary frequency, but no bloody urine was ever noticed. Appetite good, no stomach trouble, sleeps good, and bowels constipated. Still remaining in bed on the doctor's advice, feeling almost normal, but came to the hospital for a diagnosis because she still had pus in the urine.

Physical examination: Rather anemic and thin, but practically negative except for moderate deep pressure soreness low down in the left abdomen and with some tenderness through the left kidney region on bimanual examination, but no definite mass was felt. On bimanual pelvic examination a hard rounded tender mass was felt just to the left of the midportion of the otherwise normal uterus. This did not feel like a tumor and its size, apparently larger than a queen olive, made it appear unusual for ureter stone; recto-abdominal bimanual examination was now made to determine if the mass was due to a lodged ureter stone; by this method it was easily palpated, and easily moved backward and upward and by lowering the head of the patient's table, the stone moved backward and upward entirely beyond reach.

X-ray pictures showed the stone at various times at some point between the brim of the pelvis and the bladder, but at rest it always lay down against the uterus and bladder.

The urinary examinations made repeatedly from the

bladder urine showed sp. gr. of 1012 to 1027 acid, and always showed from 15 or 20 to 50 or more pus cells per field without casts and never more than two or three red cells per field. These were the findings repeatedly for several weeks before entering the hospital also. On cystoscopic examination by my associate, Dr. Wettstein, the bladder capacity was 300 c.c. and the bladder mucosa was normal. The right ureter mouth was normal and a No. 6 catheter passed easily for 35 cm. with a normal flow of urine which proved normal on laboratory examination. The left ureter mouth was red, contracted and obstructed, but when the catheter entered the ureter it would pass upward to the stone, at whatever level it was found, but could not be passed around it. This urine showed the pus and red cells found in the bladder specimen and staphylococci alone were grown in culture. Repeated staining for tubercle bacilli was negative.

Her Hb was 69 per cent.; white count 5400; reds 3 millions; morphology good; blood pressure, diastolic 70, systolic, 100. Right renal function tests at a high normal.

Diagnosis.—A migratory right ureteral stone rather oblong or ovalin shape and about one inch in its short diameter with dilated and septic left ureter and renal pelvis. Kidney evidently not destroyed; right kidney normal. Patient rather normal otherwise except for a pulse of 90 to 100 and occasionally about one degree of fever. At operation on August 14 under ether a low left lateral abdominal muscle splitting incision was made down to the peritoneum which was peeled up carrying the ureter with it. This was as large as the ordinary small intestine, thickened from inflammatory changes and full of contents. The stone was felt below against the uterus and bladder, but on attempting to bring it upward with the patient in a moderate Trendelenburg position the stone suddenly slipped upward beyond the operative field and was lost; we were unable again to locate it until opening into the abdomen proper at the portion of the wound farthest forward from the ureter; with one hand in the abdomen it was then found in the dilated pelvis and brought down to the operative field, where it was held, the ureter opened and a soft muddy plastic type of phosphate stone was removed, being much larger than a queen olive and weighing 216 grains. The removal of the stone was followed by the escape of several ounces of pussy urine. The ureter was closed except that a one-fourth inch gum tube drainage was left in the ureter for ten or twelve days, a dam drain was left in space behind the ureter and the wound closed.

The ureter tube drained freely, but the urine contained very little pus when the tube was removed, the wound closed promptly and the patient was recuperating nicely when she left the hospital a month later, having had no complications except a toxic psychosis developing the next day after operation and lasting two days. This patient was to have reported back for further study, but has not done so.

THE LESSONS OF THE WORLD WAR FOR THE INTERNIST

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The majority of us are tired of the subject of the world war, and mere mention of almost any phase of it is sufficient to disperse any audience at present, but in the correct consideration of any subject a certain perspective of time is necessary for true valuation and judgment. This address has been prepared with this point in view as its chief object, for it appears that most of us now appreciate more what we have acquired in the service than seemed possible shortly after our discharge, when return to our civil interests and thought again became dominant.

About twenty per cent. of our American profession enlisted for service in the World War. Of this total number, but a very small percentage entered because of obligation or draft, and the entire twenty per cent. practically represents the spontaneous response of the profession to the call to duty. Ours was the first of the American Army to enter France and Belgium. The Medical Department was the first to be under fire; the first to suffer casualties, and the first to receive death at the hands of the enemy—yet we are listed as non-combatants. Though numerically at the outset of war the Medical Department of the army was one of its smallest, it was among the very first to expand itself into an efficient working unit. Criticism has been leveled, and justly, against almost every arm and corps of our military establishment, but very little from the outside sources, which, after all, is the most correct origin for criticism, against the Medical Department. Such criticism as has arisen has been mostly in our own profession and it has been a most healthy and proper criticism for it has been and is almost entirely designed to be constructive, not destructive. I am very certain that we as a profession are more determined than any other class that the errors and mistakes which developed in the medical conduct of the war shall not occur again, and while often personalities and personal injustice and injury has been the cause of the criticism, its effort has been to eliminate avoidable occurrences of like nature in the future and its real purpose has been that

the service of the Medical Department for the citizen and soldier shall in the future be better and more perfect. The public and the individual belligerent soldier has come out of this war with more commendation for the medical man and the medical department than has ever before been our fortune in former wars—almost no charge of basic or general fault against the medical profession has been brought by the general public; we have come out of this war with a better standing and a better appreciation on the part of the nation than we went in. This is, if you will study history a very unique and surprising occurrence. In point of spontaneous volunteering and in efficiency of result the engineering professions and ourselves have made good to a most gratifying degree. Please recall that many of our Base Hospitals, as to complete personnel, were enlisted and organized of volunteers before the draft and the whole medical department has been at least 50 per cent free will men.

Very few indeed of the physicians, men and nurses who volunteered did so with any other idea than that of duty and patriotic service; most of us expected to be given uncongenial and unaccustomed work; to deteriorate professionally and to return to find our practices in very many instances, as a comrade has expressed it to me, "Spurlos Versenkt." Many, I regret to say, especially among the younger members of the profession, have realized this in full and while we are very willing and glad to extend our assistance and sympathies to the unfortunate members of our enemy profession in Austria and Germany, let us not forget the very considerable number of our own men who returned to find their little castles, built with so much effort and strain, leveled and disseminated as Seichprey and Varenne or as shattered as Rheims. It is now time perhaps for us to consider, to put it in the terms of a famous politician, "What we got out of it."

To me a very surprising fact which appeared very briefly after the call to service was the small number of available internists. Surgeons and would-be surgeons were apparently abundant relatively, specialists of almost every variety from orthopedists to psychiatrists were relatively frequent, but I was early informed by Dr. Theo. Janeway, then in charge of personnel in this sub-department, that very great difficulty was experienced in finding enough qualified, or ambitious

to-be-qualified men, for work in Internal Medicine in the Camp Hospitals, and of course the experience in all wars has been that the management of disease has been a more insistent and difficult problem than the surgical work. This is the first modern war in which death from battle casualty has been greater than that from disease. This fact must be considered as indeed a great compliment to our special profession rather than to the greater efficiency of the weapons and methods of modern war. Sanitary and medical science have still outstripped military art and science.

Even after we were actively engaged in warfare this same relative dearth in the supply of internists was still apparent. At one time in France I found a very active Evacuation Hospital, just back of the lines in which upwards of one thousand cases of pneumonia and acute respiratory disease were under the professional care of one medical officer, and he was trained for, and had never practiced anything but, surgery. Of course, in very many instances, perhaps most, this was due to improper handling of the personnel, for the regular medical officer, Colonel Wadhams has said had unfortunately but little acquaintance with the profession at large and to a considerable degree the archaic idea still prevailed among certain of the older and less progressive members of the Medical Department that any doctor was a doctor and equally competent to do a laparotomy, break an epidemic of typhus, or supervise the movement of a mobile hospital. Happily this idea has now passed and the Medical Department of the future will, under its present efficient head fully recognize special training and abilities and such errors will certainly not occur again, even should we again suffer from a pacifist overlord.

As I look back on my service, however, and I find that my observation has in general been identical with that of others in my line of medical endeavor, I find that I have gained greatly personally from my military experience, in my grasp and knowledge of Internal Medicine and I believe that one who has carefully followed the literature of the war, as it is slowly coming into print, must be impressed also with the fact that very great and important contributions to the science of internal medicine have resulted and that at the same time the sometimes narrow viewpoint of the specialist has been tremendously

broadened by close association with other branches of medical work, particularly under the stress and strain of a "Great Common Cause," certainly our usefulness to mankind in general has been greatly increased. I am quite certain that the soldier doctor has returned not only a better doctor but a better citizen and I can further not resist this opportunity of saying that the social unrest, unpatriotic actions and talk, profiteering, bolshevism and destructive propaganda which we have recently witnessed have not been the work of the returned soldier, but has been perpetrated mostly by those who seized the opportunity of the war and the absence of so many virile citizens in the Army, to "do things to us"—a sentiment very well put in a song of the homecoming transports.

In this address it is my purpose to point out in what ways the internist and medical medicine have profited from the lessons of the war. I can only wish that they were so definite and easy of demonstration in the other branches of American work and life.

Every doctor has realized and regretted after his student and interne days the infrequency with which he comes in contact with the normal in any branch of medical practice, particularly so, I believe in internal medicine. Most of us had a very vague and indefinite conception of just what made up the normal. We were either too likely to overestimate the import of a murmur at the base of the heart and to judge such a person as a problem in pathology instead of a deviation or idiosyncrasy in the normal or to neglect and pass over as unimportant many significant nervous and other phenomena which indicated the onset of serious diseases, but in a stage which rarely comes to our wards or consulting rooms. For the first time in my life I have seen the whole story of many disease conditions; I have seen the environment under which it develops; I have seen the apparently trivial and unimportant deviations in physiology which lead on to pneumonia or to an insanity, perhaps of eventual homicidal type.

One of the greatest lessons of the war for me has been the examination, hurried and unfortunately cursory as it often was, of literally thousands of men. I have seen these men, some of whom I judged to be weak, sick and unfitted for any kind of strain, go through indescribable service and return magnificent men. I have seen

craven, ignorant, even criminal types, become heroes such as mythology tells us of. I have seen on the other hand magnificent athletes fall out and become fatally ill from light practice marches; I have seen those whom I had passed as perfect specimens, break and become an incubus when the truly normal man throve morally, mentally and physically. In short my judgment of normality has altogether come to be based more on physiological tests than on pathological or mere physical findings. I have learned more from an old experienced recruiting sergeant than ever from my professor of diagnosis as to the judgment of real man material. It is not how the heart sounds, it is how it acts; it is not whether this rale is moist, subcrepitant or something else, it is how the man stands the stress of reasonable or of abnormal respiratory requirements. I have learned as never before the value of *inspection*, of seeing your patient naked and all over, of seeing how he breathes, how he responds to not only physical stress, but to emotional stimuli as well; how his muscles, tendons and joints work; how his nervous system responds; how the skin and hair reflect the general welfare of the body. Numerous early manifestations of disease, of forms or stages with which I was entirely unfamiliar have been shown me in these examinations of large numbers of supposedly normal men. Deformities of habit, of occupational origin as well as those caused by disease have been observed; unsuspected neoplasms in men thought to be healthy and which would have evaded the ordinary hospital inspection have become evident under the exercise through which the recruit is tested out. Skin rashes, early luetic lesions, impetigo contagiosa and myriads of types of endocrine disturbance, which would under ordinary conditions have escaped detection, were soon quickly recognized by the conscientious and ambitious medical officer. Early forms of joint disease, supernumerary ribs, undeveloped and improperly enervated muscle areas have been discovered and in so very many instances corrected under the properly graduated military drill, which I firmly believe is of all forms of physical exercise that most universally beneficial.

One of the greatest surprises, I doubt not, to most internists, has been in regard to cardiac murmurs and their disqualifying nature or utterly unimportant significance. This refers par-

ticularly to atypical murmurs located at the apex and even more frequently at the pulmonary valve area, that "Zone of Doubt" to most of us. Observation has shown that in very many instances, properly graded exercise has caused such murmurs to entirely disappear. The same is true of some arrhythmias. It has been a frequent observation that rapid and irregular action of the heart, even in non-smokers, often disappeared after training, in fact where the type of a murmur or an arrhythmia is not clear and definite, signs of inadequate function of the heart wanting, I now refuse to consider the condition as basically organic except when this becomes apparent under the functional tests.

This is equally true of many apparent respiratory lesions. It is an undeniable fact that many individuals, and especially those whose work and sports have been of a sedentary character breathe so improperly that actual physical signs appear over the chest which justify one in the diagnosis of true pulmonary lesions. Proper training in breathing, such as is developed from the setting-up drill causes many of these signs to entirely disappear. I have begun to understand why often the ignorant trainer of men frequently succeeded with patients suffering from supposed cardiac and pulmonary defects better than I have been able to along routine medical lines. Again, it is often the functional test and not the physical sign and its interpretation on a basis of pathological anatomy which is the more valuable in diagnosis and prognosis and in treatment as well. The seeming miracles which were accomplished in the classification camp-training is, of course, based on the same idea of those numerous, perhaps ignorant and unscientific but capable men who have been conducting so successfully training farms along methods in which the human is judged, not by accurate scientific details, but by general "condition" or "Set Up," just as a good horseman judges a horse or a breeder a desirable bull.

A frequent experience was to have men report as recruits, undernourished, complaining—often entirely honestly—of hyperacidity, of intestinal stasis, probable gastric or duodenal ulcer, and with all manner of x-ray abnormalities and yet many of these men did exceedingly well on the rough soldier ration associated with his drill and regular, though hard, life. Cure of constipation by the exceedingly satisfactory U. S. Army

ration (when obtainable) associated with general soldier duty was very common. It has been a matter of general observation even as regards actively combatant troops who lived and fought under indescribable rigors and privations that a gain in weight and an infinitely better verve and vigor resulted from service. For one man who has returned disabled from even this active war service, there is no doubt but that ten have returned improved physically and I am sure mentally and morally also (I do not of course refer to those who were wounded or who suffered from the grave diseases incident to their service).

Again in this regard it appears to me that somehow we internists have not in the past properly interpreted many apparent early disease conditions nor have we directed treatment along the proper lines, sometimes doubtless the quack or faker who sizes up his man or victim on more general lines has been the more correct in treatment and more efficient in his judgment. Even with all that we have written and said in regard to the benefits of outdoor and balanced physical lives, it seems quite certain that in some way we have underestimated its value, unappreciated its efficiency or misjudged in many instances its proper application. Again it seems that we have judged too much from the anatomical or apparently anatomical lesions and have not sufficiently considered the physiological or functional tests and methods of training.

Though perhaps a bit wide of my subject, (though to my mind it is quite necessary for the internist, and perhaps for all other physicians as well to have some understanding of psychology or psychiatry,) I think that war experience has shown that these two subjects blend so absolutely that there is no true line of cleavage, and that at least an elementary knowledge of both is essential for the internist. Many men who appeared defective, timorous, ignorant or perhaps moral cowards have been shown to be such from some definite disease condition, a defective thyroid secretion, a pituitary defect which would under ordinary conditions have passed over in civil life as merely a mental defect. On the other hand individuals in no small percentage of cases who seemed mentally or morally defective under the stimulating effect of example and crowd psychology developed into clever, resourceful and courageous men. Many retiring, overly gentle and lady-like persons, whom I

should have classed, after Barker, as defective in gonads, proved under military life to have been suffering not from some endocrine defect but merely from bad environment, mental or social habits. I am strong in the belief, much like the "Senior Mr. Weller" that the teaching of the crowd is of great educational value. Under this stimulation individuals apparently defective have developed into well poised men with tremendous power to command. Close association in one duty with a psychiatrist showed me also that many men trained to command, and apparently perfect specimens of the soldier, under the stress of actual war failed utterly and in many instances due quite certainly to endocrine defect, we can by no means as yet fully diagnose or exclude serious endocrine discrepancies by mere physical appearance. I recall also very well a little high-voiced gentle creature, with the female distribution of hair and a doll-like face who, under fighting conditions, achieved the adoration of his men and a sobriquet utterly impossible to write or speak in such an audience, but expressing the highest tribute of the soldier to this "Female Type" as to ability to think, fight, lead men, and curse. Again it is the functional test that counts and nowhere as in the military service does this appear so strikingly to the inquiring medical man. On the other hand utter inability of one young student to handle his piece or to drill showed a very definite but hitherto undetected Thompson's disease, and in another almost similar case, a juvenile poliomyelitis very difficult to recognize otherwise was found to be the disqualifying factor.

Very many instances of nerve and muscle incoordination, bespeaking cerebral or spinal lues, neoplasm of the brain or cord or muscle atrophies, only became evident in the course of drill. In some instances when through injury or due to actual central or peripheral nervous disease, the closely coordinated movements of the drill sufficed to train subnormal persons into conditions closely approaching the normal. A case of Thompson's disease, always the cause of a ragged effect in company or volley firing, proved to be a most surprisingly efficient sniper and between the astute company officer and the intelligent medical man many misfits in one position proved most efficient when properly placed. I think that most medical officers will agree with me that in most case of either physical, mental

or moral disability, a disease factor was at the back. I except here in so far as I am personally concerned the congenital pacifist; the basis of his lesion was in my opinion unspeakable in origin.

Thus far I have attempted to show that the medical officer serving with the line has had real material for professional advancement. In America many of us sympathized with him as having work of a purely military and non-professional character; in France most of us envied his record, but by no means his experience. Of all the medical men whom I most respect because of their war record, it is the regimental and battalion medical man and it is my firm conviction that those of them who went in as internists, though feeling that they have perhaps returned to their chosen branch of medical science, disqualified to some degree, have in most cases been richly rewarded professionally for a signal service performed with conspicuous credit to the Nation and with great honor to the profession.

At the outset of the war it was freely predicted that the conditions of the training camp, of barrack life, and of military service in general would inevitably spread tuberculosis very widely and that according to the prognosis of various hysterically inclined physicians, pacifists and "pro-Boche," tuberculosis would finally become widespread throughout the country as a result of this adventure. Perhaps no one experiment or measure establishing so certainly the sane status of tuberculosis in America and dispersing its alleged highly contagious character, has ever compared in wonderousness with the draft and its careful examinations.

Undoubtedly whatever possibility that such conditions might arise was eliminated in large part by the early formation of classes of medical examiners particularly well trained in this branch of work and in general by the quite efficient elimination of the frankly tubercular by the boards of non-military medical examiners. In the first drafts sent to the camps many instances of frank and even advanced pulmonary tuberculosis were found; these became fewer and fewer in number as the time went on and by the time special examiners were furnished in the camps very few frankly advanced or definite cases were arriving. It was a noteworthy fact, however, that even persons who reached camp showing suspicious conditions, frequently cleared up under

the healthy routine and life and we must either conclude that we are as a class too much inclined to agree in diagnosis with certain of the narrowly trained tubercular specialists and to consider all variations in lung anatomy or physiology as therefore tuberculous, or that the conditions surrounding the life of the recruit were such as to act in a curative way. I think that all of us who have witnessed the very considerable number of persistent lung signs after the various recent epidemics of pneumonia and influenza have been much impressed with the undesirable viewpoint that persistent lung lesions are necessarily tubercular, and even when the x-ray is used as a routine in the study of many of these cases it also was found to be very frequently misleading.

I shall never again accept as final an x-ray diagnosis of pulmonary tuberculosis unless it is substantiated by clinical or bacteriological findings. Not only do we find it difficult to differentiate by the x-ray, tuberculosis from chronic bronchitis and broncho-pneumonia but also from various circulatory defects as a result of which congested areas in the lung are very frequently mistaken both by the x-ray man and on physical examination for tuberculosis.

I am much impressed with the accuracy of the statement of Sir James McKenzie, of the British forces, that in the end the diagnosis of tuberculosis, in so far as finality is concerned, relies chiefly on the presence or absence of the tubercle bacillus in diagnosable numbers in the sputum.

My war experience has clearly demonstrated to me the dangers of haphazard diagnosis of pulmonary tuberculosis, and in this regard, even among the young, we must recall a condition frequently overlooked by the clinician of small experience, namely, the occurrence of pulmonary or pleural growths.

It is a matter very difficult to accurately ascertain, but in so far as the data yet collected go, it seems that the military service shows a rather smaller percentage of developing cases of tuberculosis than occurs in a like number of civilians of similar age and supposed health. At least the fact is well established that tuberculosis as a contagion does not rank in any way as an important military factor—it seems also most probable that specialists have further very generously greatly overestimated its contagious degree, at

least among adults in civil life also. The wide public information, or misinformation, in regard to tuberculosis has beyond doubt often worked very much hardship and provoked quite as much misunderstanding as understanding in regard to this disease.

As to the value of special boards and of the employment and training of medical specialists in the Army, no reasonable doubt can further exist. In the final full recognition of this fact by our own Army as well as by the Germans, British and French, though with the latter in lesser degree, the wisdom of this policy has been well demonstrated and finally accepted.

In this respect, however, as is also the case with most other human endeavors, it has been found that the part-time man, whose military activities or interests in the soldier were limited to occasional visits of so-called inspection or instruction, resulted in little but obstruction and nuisance for those charged with the real medical care of the troops. Much of the misleading literature which has appeared concerning the medical work of the war has appeared from such sources, and I entirely agree with the regular establishment that for a correct understanding of medical-military problems and needs, an elementary military concept or training is essential. This was difficult enough to acquire for most of us civilians who gave our entire time and interest to the service, and assistance from without usually resulted but in confusion, misunderstanding and waste of effort.

The value of the method has been particularly well shown in regard to cardio-vascular boards. Many other than merely circulatory cases came before these examiners and a close liaison was early established in most camps between the work of the cardio-vascular examiners and the tubercular boards and cases of doubt were freely exchanged between both these and the other various special wards. It goes without saying that the error of old text-book rules which in general overestimate the clinical importance of heart murmurs was, as has been recognized very generally by clinicians outside, again demonstrated and it became a constant warning that too much importance must not be placed on the evidence of cardiac murmurs or irregularities; functional tests were soon found to be of much greater importance and accuracy.

There has been an almost universal remark

of surprise on the part of the internists at the relative infrequency of acute rheumatic fever in the army, both here and in France. In England it has always been less frequent than with us, but why the relative infrequency of the condition both in our army at home and of that in France? With this fact came an utter surprise to most of us who have been accustomed to consider acute rheumatic fever as a disease of great frequency and importance in outdoor classes and occupations in particular. It has been the most feared disease of the pioneer and prospector, of the engineering and mining camps, and in times past in our frontier army. As a result cases of acute endocarditis have been relatively infrequent and in my own civil practice, I actually see more cases in a year than I saw in the tremendously larger number of patients whom I had under observation in the army for the same period of time. Thus far I have no adequate explanation, certainly in so far as our battle line troops were concerned they were living under precisely the same, and generally much exaggerated, conditions as those in which we have in the past expected rheumatic fever to develop with frequency.

Beyond any doubt the most important circulatory condition to which our attention has been drawn during the war had been that which the British term "D. A. H."—Disordered Action of the Heart, or as the Effort Syndrome. One of the greatest surprises of my life was to find this outstanding condition, barely recognized in civil life, so frequent in our training camps, particularly perhaps at Camp Upton, which drew its recruits at first almost exclusively from New York City's cosmopolitan population. In my opinion we must make a primary and sharp distinction between what we class as D. A. H. and the British Effort Syndrome. In the first place the British cases as a rule developed after or during the great effort incident to front-line duty, the cases in America developed or reported fully developed before one stroke of effort had been expended in anything like a military way. We must, therefore, be very careful in attempting to class our cases with those described by the British or in assuming a similar mechanism or etiology.

There can be no doubt, whatever, nor have I heard this questioned by those richly familiar with the condition here in America but that it

developed with us only in cases which were basically and primarily defective or abnormal. In all instances a base of endocrine defect was evident, rather than one of physical effort. Those relatively few instances which developed in our armies in France under conditions similar to those of the British were, however, like them and very different from the numerous cases which we saw particularly in the mobilization camps in the East and which were definitely correctly classified after the American nomenclature as neuro-circulatory asthenia.

Many, perhaps most of these men, would not be classed under civil conditions of life as abnormal, yet our clinics and hospitals are crowded with such instances and always have been in my experience, though up to now I have entirely failed to appreciate the fact. The patients are definitely abnormal or unstable in many respects; they are such as are derived from families in which nervous and circulatory instability are present, for heredity is definitely discernable in almost all cases.

Racially this familial taint is also very evident and it has been found most frequent in the Hebrews, particularly the Russian Jews, among the Italians, the Irish, the Americans, the English, the Scotch and least frequent of all among the Negroes. I have seen but one typical case among colored troops. In practically all the instances in which we were able to carefully trace out parental and juvenile history, a definite endocrine defect could be found, a history of youthful inadequacy, especially in a physical direction, few of these boys had been interested in tennis, in golf and even still fewer in that bulwark of American athletics—baseball.

They were in larger part interested in the gentler forms of recreation and relaxation, in reading, music, debating and the like and they were, therefore, for the greater part thrown during their developmental period, for entertainment largely among girls and young women, yet it is a striking fact that few of these young men developed either natural or abnormal sexual proclivities. Many had experienced no sexual desire, least of all for the opposite sex, and where sexual manifestations were present they were more often than otherwise bent and abnormal, in comparison with that normal for the average American of military age. Goddard in particular has called attention to these un-

doubted sexual aberrations, which in my opinion still more definitely line up this order as an endocrinal one.

Few, very few, of these men were able, even under the careful training of the developmental battalions, to be made fit for enlisted line duty, but many of our most efficient clerks and executive men were developed from this material and I have in mind several most efficient officers, even in machine gun companies who were of this classification. Bravery to an abnormal degree among them was quite as common as cowardice, for to a very large extent they are sentimentalists, men of high ideals, self-effacing, true crusaders in spirit, but still lacking in the manly vigor and stamina necessary for an enlisted combatant. Some of these men were mistaken for malingerers or cowards, yet great heroes have come from their ranks. In the medical department, however, I have found some of my most plucky, generous and indefatigable workers to be of this type, but their physical resistance was low and they were incapable of protracted strain or effort. I feel that I have gone out into civil life as a result of these studies far better able to judge as to the applicability of boys of this type for this or that occupation and a great and new understanding has been borne in upon us in our comprehension and appreciation of the possibilities of the "Sissy" young boy.

This material is a very valuable one to the nation in recruiting its musicians, writers, teachers, poets, idealists and students of all classes; it is material quite worthless for the production of pugilists, baseball heroes, aggressive business men or stable and successful agriculturists; more than a few of our successful physicians are, however, of this type. Although at first I was strongly persuaded that in these men we were dealing with cases of hyperthyroidism, at least in a potential period, I am now fully convinced that this phase of the condition is but a symptom, perhaps a result, and that there is a deep underlying factor bearing on not only one ductless gland but probably several and very important among them the sexual glands.

Internists, as a general rule, have I think taken altogether too little interest in and too little account of the minor mental deviations. Very much of the quality which determines success or

failure in medical practice, as we often know, depends not so much on scientific training and understanding, as on what we choose to call "personality." Equally important is an understanding, oftentimes not personally appreciated, of psychology and of the minor deviations in man's mind, some of which lead up when fully developed, to real mental aberration. A famous psychiatrist has said that every successful internist, and I believe that this pertains much more certainly to internists than to surgeons, is a student of psychology and through this gift, or from training in its mysteries, comes much of the intuitive sensing of the patient's mental needs or viewpoints which permits one physician to succeed when another equally skilled fails.

It is this lack of appreciation to its fullest degree on our part that has led to the rise and success, at least financial, of such schisms as Christian Science, thought cure, osteopathy and the like. I am very certain that all of us have tremendously profited in our understanding of the mechanisms of the mind in our very close association with that splendid group of psychiatrists who have so signally distinguished themselves in the late war.

We have been led to study and to apply our knowledge in many minor mental ailments and in their alleviation; the introduction of games, of music, entertainments, theatricals, of boxing matches or horse shows to keep our well men well and to cure or alleviate many sick into a contented and receptive mood of convalescence.

Those of you who did not see our wonderful men, immediately after the terrific emotional and physical stress of the combat, go down in moral, in physique, in content and to note the increase in infractions of sanitary, social and military customs and laws immediately after the armistice can hardly appreciate the almost startling and sudden relief of these conditions which followed (and this was particularly manifest in the convalescence of both wounded and sick men) after the introduction of the various interesting military maneuvers, schools, horse shows, band concerts, amateur theatricals, educational courses and the like which were so admirably introduced into our army after the armistice, very largely as a result of the combined action of our medical and higher military authorities.

The slump in physique, stamina, health, morality and unity of our army, men and officers alike, immediately after the fighting ceased was succeeded by the period of restitution which followed from these applied therapeutic methods and which resulted in sending back to you such men as marched through the streets of Chicago, New York and other great cities in our returning divisions, a clinical demonstration of the effect of these measures.

It should interest you to know that so attractive were the activities made in certain divisions and brigades that it finally became necessary to actually order men on furlough to the South of France even away from the filth and disruption of the army fronts where life had then become of so much interest and pleasure.

A lesson of great utility for the internist has been the startlingly excellent results which follow regularly supervised and graduated drill in the period of convalescence, particularly from the infections. The work in the reconstructive battalions, both here and in France, was indeed a revelation and shows how similar methods should be utilized, particularly in hospitals and institutions. I think that all of us who have seen these results have become entirely convinced that haphazard methods are no more to be tolerated in curative and developmental exercise than they are in the administration of digitalis, morphia or other important drugs. In regard to constipation, particularly, another lesson has been learned, for many of my soldiers have told me that while in the army they were not only freed from constipation but also that as an apparent result there was an increase in strength, vigor and in the sense of well being. Unfortunately under civil conditions in many cases a reverse has followed.

If we are but willing to profit by it, we have in the establishment of gymnasium classes, in physical training farms and so on, a hitherto unappreciated therapeutic measure, formerly only utilized by various semi-professional sanitariums or by physical trainers who, notwithstanding perhaps an utter lack of knowledge of the very simplest physiological training, have none the less accomplished real results. It behooves us to study these methods more and to profit by them.

I feel that we in medicine must apply such

methods in our treatment of convalescents, in our management of the large classes of neurosis, emotional, endocrinal and minor mental cases. Various sanitariums have long attempted such methods but we internists must recognize more fully the potency of these treatments and apply them in our every day work.

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(To be continued)

INTESTINAL SAND WITH REPORT OF A CASE OF 20 YEARS' STANDING.*

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In 1909, a case presented itself to me with a clinical record of sand being passed, with bowel movements, over quite a long period. A careful study, in the hospital, under strict diet, soon excluded the possibility of sand being ingested. Reference to the literature available showed a very limited information on the subject of intestinal sand.

During several years, now the case has been under my observation. Large quantities of sand have been passed at irregular intervals. This has been analyzed and found to be true intestinal sand and not the false sand sometimes found after the ingestion of certain foods, particularly pears and other fruits.

As so little reference can be found in our American literature on this subject, and as the whole case has many points of interest, I thought it might be of interest to present a review of what literature there is, and give in detail a history of my case.

Under miscellaneous affections of the intestines, Osler, in his *Practice of Medicine*, refers to true mucous colitis, in which, at times, there appears "triple phosphate, cholesterin and fatty crystals and occasionally fine sandlike concretions."

He also has a few lines on intestinal sand, true and false. He says "true intestinal sand is of animal origin, gritty fine particles, usually gray or colorless, sometimes dark. It is formed

in the bowel and is made up largely of lime salts."

In 1903 (Trans. Coll. of Phys., Phila.), Dr. John K. Mitchell presented a case of intestinal sand, with specimen. The patient had both varieties, true and false, and passed at the same time massed dark colored muddy stools and large quantities of mucus. He was a highly neurotic man, aged 42. Had had typhoid and repeated attacks of severe pain resembling bilious colic. When placed on milk diet sand first appeared and was passed in every stool, for days at a time. It disappeared when patient was placed on general diet. The specimen was composed of calcium phosphate and carbonate. No bile salts or coloring matter entered into it. Its color was pale or brownish yellow.

These cases are the only ones I can find reported in American literature as found in the Library of the Surgeon General and the New York Academy of Medicine and other sources at my disposal.

In British literature (*Indian Medical Gazette*, 1902), Dr. Charles H. Bedford reports a case of true intestinal sand, with specimen, from a European lady of 44, with a marked history of gout. There was distinct severe muco-colitis coincident with the passage of sand. No history of colicky pains. The analysis of the sand was: Moisture, 5.20%; Ca. Phosphate, 28.68%, Ca. Carb., 5.20%, Mg. Phos., 0.46%; Organic Matter, 60.45%. No traces of uric acid or urates found.

He states that true intestinal sand yields a much higher percentage (from 20% to 70%) of inorganic salts than the false variety in which only about 2% to 3% is generally found. This is readily understood when we know that false sand is derived from undigested vegetable particles coated with earthy salts. Professor Delphine at the London Pathological Society in 1890 first called attention to the tendency of pears and figs and bananas to produce false sand. Bedford thought that there was some relation of true sand to gout, but he was unable to account for the absence of uric acid compounds from the sand when they are so common in the gouty deposits in the other parts of the

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body. He attempts to account for their absence by theories which I will try to quote.

In London *Lancet*, 1902, Bedford also reports a specimen from which he has no clinical record. The analysis shows lime salts predominating, but in less than usual per cent.

Crombie in *Lancet*, 1902, reports three cases in the discussion of Duckworth's paper. He says that the reason intestinal sand is found more frequently in India is because in Indian hospitals it is a routine practice to wash all the stools in all cases of intestinal disease. This probably leads to its discovery in many cases where it is not suspected.

He cites a case of an Armenian who had spent his life in Calcutta. He had pernicious anemia. There was found in each of his stools when washed small quantities of true intestinal sand which had never been suspected and which would never have been found except for washing. This patient had been for a long time on a diet largely of milk and without fruit or vegetables. This tends to support the suggestion of Bedford as to the influence of a milk diet on the formation of true sand.

In *Medico-Chirurgical Transactions* (London), 1901, and also in *Lancet*, 1902, Sir D. Duckworth and A. E. Garrod have "A Contribution on Intestinal Sand, with Notes on a Case."

They say that "cases presenting this symptom appear to have been of singular infrequency in the British Isles for it is scarcely possible that it can have been often overlooked. English literature on the subject is almost a blank and the best text-books in this country and in America make but little reference to it."

The authors report a case of true intestinal sand in which the characteristics are about the same as other cases reported. There was, however, very little pain in connection with the course. The gritty material passed had the appearance of fine sand, "its ground color was a deep brown with an admixture of pale or almost colorless particles. Under the microscope they had a variety of shapes." No cellular elements could be seen and the basis did not consist of vegetable debris of any kind. An analysis is given in which the inorganic residue, after combustion, is 61.31%. A very extensive analysis, spectroscopic and otherwise, is given.

They make a careful distinction between the

false and the true intestinal sand going quite into the character of the former and showing how the true variety is not to be confused with the so-called "biliary sand." The writers consider that the composition of true intestinal sand precludes its biliary origin as it contains no cholesterin, and bile pigment, if present, is only in traces. On the other hand, they say, true sand is most often met with in connection with intestinal disorders and frequently with mucocolitis.

After presenting quite an extensive argument the authors conclude intestinal sand has its origin and formation in the intestines, as both clinical and chemical evidence point in this direction. They suggest the colon as the more probable seat of formation. In their paper they make reference to 24 French and German articles on the subject.

Crombie in discussing this paper said that he had seen three cases in the European General Hospital in Calcutta in which the chief symptom was colic, usually very intense but not continuous.

J. McNamara (*British Medical Journal*, 1903), looks at the condition from an evolutionary standpoint and suggests that the formation of sand is a reversion, in the mammal, to the egg shell forming function of the bird and goes into the comparative anatomy to prove his theory.

J. S. Meyer and J. E. Cook (*The American Jour. of Med. Sciences*, 1909) report a case, review the literature and give an analysis of the sand. But the review of the case indicates that they believe it to be of the false variety. They tried experimentally to produce sand with vegetables but could not.

They were, however, able to produce false sand by the ingestion of one or two bananas and examination of the stools 24 hours later.

W. B. Ranson reports a case of intestinal sand in *Quar. Med. Jour.* (Sheffield), 1902. This case was marked by a severe epigastric pain and symptoms that were practically those of gallstones. The patient passed about a teaspoonful of sand a day. It was of buff color and under the microscope was of yellowish brown color, ovoid or spherical and studded with projecting spikes. It was insoluble in acids and alkalis and did not give a murexide reaction. The details

of diet in this case are not given, but the sand had been constantly passing for a year, so it is reasonable to assume that no particular article of diet was responsible for the formation.

J. C. Verco (*Australasian Med. Gaz.*, 1904) gives a very interesting description of microscopic appearance of false sand passed after the patient had eaten a large quantity of pears, and which was proven to be, by chemical analysis, the sclerenchymatous substance, which forms the hard granules of the pear, and which has become coated with inorganic salts.

George Parker reports two cases (*Bristol Med. Chirurg. Jour.*, 1910) in which several tablespoonfuls of sand were passed. Neither case had pain, but both had passed gallstones.

The sand contained neither cholesterol nor bile salts, and differed in every way from what is known as biliary sand.

While this is rather a lengthy review of the literature of intestinal sand, I present it because it is, with a few minor exceptions, about all that has been published on this rare and interesting condition.

I wish to call your attention to a brief outline of a case under my observation for years, and in which I have had full opportunity to study the diet, habits and clinical history of the patient and to obtain many times specimens of the sand:

Mrs. S., first seen in 1909. Married, one child. Family history negative. At age 15 began having what were called bilious attacks. Returned with vomiting and diarrhea at intervals of six weeks; seven years ago had "typhoid" accompanied by persistent vomiting.

During past two years attacks have increased in frequency and severity. Begin with uneasiness and fluttering about umbilicus followed by nausea and diarrhea with large quantity of stringy mucus passing from bowel. In September, 1909, while under my observation, in hospital passed 2 to 3 ounces of hard gritty sand from bowel. Says she had noticed for several years a gritty substance passing, but had not seen it before. Its passage was preceded by severe colic-like pains, and usually followed physical weariness or emotional exhaustion.

Patient is of a nervous disposition, but of good self-control and able at most times to do all that her life requires of her. There is nothing in physical examination of particular importance except tenderness and at times rigidity over the gall-bladder and at one time what seemed to be an acute attack of appendicitis.

Eyes, teeth, ears, throat, chest and heart are negative. Stomach normal in size, test meal showed inc. total acidity. Spleen normal size and not tender, liver

normal. Abdomen distended at times, but between attacks of pain soft and flat. Pelvis negative. Urine always negative, chemically and microscopically. Blood count; red cells 3,760,000, whites 4,000.

Hemoglobin 75 per cent. (Dare). Blood Wassermann negative. Blood pressure, systolic, 140 m.m.; diastolic, 80 mm.

Notes taken from detailed record of the past ten years show that sand has been passed at frequent intervals during that time, in quantity varying from a few grains to one ounce in twenty-four hours. In most instances the passing of sand has been accompanied by pain in the stomach or bowels. This pain has been of a severe colicky character, at times so intense as to produce faintness and, in some instances, almost collapse. Vomiting usually precedes the passage. After the sand passes there is generally relief, but feels weak most of the next day. The attacks are commonly preceded by great nervousness, depression of spirits and are usually followed by the discharge of thick, ropy, tenacious, grayish mucus from the bowel. Some of the attacks have simulated gallstone colic as well as appendicitis, but careful observation and the long history have eliminated those conditions.

Since November, 1919, she has been in good general health. In March, 1920, weight was 134 lbs. Greatest weight was 145 lbs. in 1901. Since March, 1920, has had attacks every four to six weeks of shortness of breath, anxiety and functional heart disturbance. These attacks do not persist long and in the interval between feels in good health.

Recent x-ray films have shown two teeth to have pus pockets, but no general symptoms showing from them.

There has not been, at any time, local irritation in the rectum and the mucous membrane appears normal. A few external hemorrhoids, without irritation.

I present with this paper specimens of the sand passed by this patient, with analysis of same. It is hard, crystalline, yellowish-gray in color. It is partly soluble in concentrated nitric acid, which turns it to a bright orange color. It is insoluble in liquor potassa. When burned on foil it is partly consumed, but the incombustible portion is soluble in acids or alkalis. About 60 per cent. by weight is incombustible. The chief salts on analysis are calcium phosphate and carbonate. The sand does not give a murexide test and contains no bile salts.

The outstanding points, in this case, are that the patient is of a very nervous disposition. The sand is passed at all times, but much more abundantly after periods of depression or emotional disturbances. The formation and passage of sand do not seem to have any relation to the kind of food eaten. Patient has been on strict milk diet, on diet free from fruits and vegetables, and on a general mixed diet and has passed sand under all conditions in about the same quantities.

When some time has passed without the free passage of sand its reappearance in quantity is usually preceded by severe and often intense colicky pain in the region of the gall-bladder and in the small intestines, with an occasional reference to the appendiceal region.

There is nausea, vomiting at times, and frequently the passage of thick, ropy brownish mucus or a light gray flocculent mucus floating in a fluid stool.

Some sand can be washed from almost every stool and has been from stools over a period of about twenty years.

So few cases of true intestinal sand have been reported that it is not possible for me, or I think for any one, to do more than theorize on the causes or on the method of formation or the site of formation of this peculiar inorganic animal sand. Most of the cases that have been reviewed have seemed to be in patients of a peculiarly nervous disposition. They are usually associated with that form of muco-colitis which seems to have an undefined relation to disturbed conditions of the nervous system. They are in most instances characterized by severe colicky pain, and occur in patients who are, in general, in fair physical condition. Some cases reported seem to have had more sand on a strict milk diet, but in my opinion the diet has very little influence on the formation of true sand, although the false sand can undoubtedly be produced by large quantities of certain fruits.

In the case here reported the best results in controlling the passing of sand comes from measures which tend to maintain the patient at the highest possible condition of resistance, and at the greatest freedom from nervous anxiety and irritation.

Intestinal sand may not be so rare a condition as the literature on the subject would tend to suggest.

In private practise it may be, at times, more difficult to secure washing of the stools in patients of depressed and nervous tendencies, but in the routine of hospital work it might be worth while to have stools regularly washed, even in cases where sand has not now been suspected. I would suggest that, in all cases where colicky pain exists and cannot be definitely accounted for in the clinical pathology, that the stools be examined by daily washing, and, if necessary, straining through gauze.

If this were done I am convinced that a considerable number of cases of true intestinal sand will be reported and some more definite information on this interesting condition will be obtained.

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29 North 5th St.

A TRAGIC BLUNDER

A few weeks ago, here in Chicago, a little girl, six years of age, had an attack of measles followed by diphtheria. When finally a doctor was called he pronounced the case diphtheria and recommended that antitoxin be given at once. As the parents of the child do not believe in disease, they refused to allow antitoxin to be given and the child died.

The parents also refused to report the case to the Department of Health, for the reason that, as in their opinion, there is no such thing as disease, there was nothing to report. However, the case was reported by the doctor who had been called in and a health officer was sent to establish the customary quarantine and also, if possible, to induce the parents to use the usual means for saving the child's life.

The father of the child, with lofty confidence in his own judgment, said the child was not critically ill, in fact was getting better, and so nothing was done. The child died, a victim of human ignorance and folly.

A large dose of antitoxin given on the first day of the attack would have saved this life. How do we know? Because there are practically no deaths from diphtheria in cases where antitoxin is given on the first day of the attack; and very few die after receiving this remedy on the second day. But the death rate from this disease increases rapidly for each day of delay following the failure to administer antitoxin on the first day.

The first mistake made by the parents in this case was the employment of a person to treat their child who was not skilled in the diagnosis of disease and who could not recognize diphtheria when it was present. The second blunder was when the father refused to allow the doctor to use antitoxin, the only remedy that offered any chance of saving the life of his child. He had frittered away the time when a cure was certain, and he should have been both glad and willing to give his child the chance to live by even the late administration of antitoxin.

Now he cannot plead ignorance in defense of his lamentable and tragic mistake, for he was told of the danger and of the means which should have been used. It may well be wondered how a man thinks who disputes the correctness of the multiplication table. Here were two men, the one the father, the other a so-called healer, not a physician, but both of them utterly ignorant of the nature of diphtheria; yet they did not hesitate to set aside all the results

(Continued on page 59)

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JULY, 1921

Editorial

MEDICAL PRACTICE ACT OF THE STATE OF ILLINOIS HELD NOT CONSTITUTIONAL

DO WE GO BACK TO THE OLD STATE BOARD OF HEALTH SYSTEM? DRUGLESS PHYSICIANS WIN LONG FIGHT

The Illinois Medical Practice Act as revised in 1917 was found unconstitutional in the State Supreme Court on June 22d. The decision was handed down in the case of Lucius J. Love, a chiropractic of Danville, who refused to take out a license.

The court's opinion holds that the revisions of requirements for chiropractics are unreasonable and discriminatory. The court's action restores the old medical practice act in effect prior to the revision.

It was announced tonight that a motion for a new trial will be filed. In the meantime numerous prosecutions instituted by the state department of registration and education will be held up until this motion is disposed of.

VERDICT IS UNANIMOUS

There is little hope that the revision will be saved, however, as the opinion of the court, which was pre-

pared by Justice Duncan, was concurred in by the full membership of the bench.

The decision is a blow to the state medical society, which spent much time in preparing the revision of 1917, but it brings joy to the heart of President Palmer of the Des Moines (Ia.) Chiropractic school, who has been protesting against the act ever since its passage. Love, who made the fight in the Supreme court, is a graduate of the Palmer school.

The revision of 1917 was prepared by Charles E. Woodward, now president of the state constitutional convention. Its one weak spot, it seems, was the section which revised the law relating to osteopathy, chiropractics and practitioners other than medical doctors.

QUALIFICATIONS UNSTATED

The old law provided for an examination and the licensing of these practitioners, but did not undertake to specify the qualifications required of applicants for licenses.

In making the revision, applicants for licenses were required to pursue a course of study equivalent to that of the medical practitioners and in addition qualify in their own school. The educational qualification contemplated a period of four years in college.

Love took a two years' course at the Palmer school and then asked to be examined for a license. This was denied, and on advice of his attorney he began to practice for the purpose of testing the constitutionality of the law.

IT IS BUT A STEP TO THE SOVIET FORM OF GOVERNMENT

BUREAUCRATIC PRACTICE OF MEDICINE WILL
PROVE EXPENSIVE AND INEFFICIENT. UNITED
STATES SHIPPING BOARD IS AN OBJECT
AGAINST BUREAUCRATIC OPERATION OF
THE PRACTICE OF MEDICINE OR ANY
INDUSTRY REQUIRING SPECIAL
SKILL AND RESOURCEFULNESS

More help and less inefficient work goes hand in hand with public service. The Denver Water Works system cost of operation is a recent striking example of the increased cost of operation of public over private ownership. Denver's payroll for the municipal water system increased more than one hundred per cent since the city took over the water works two and one-half years ago. There are more than twice as many employees now as there were when private ownership ended and municipal ownership began.

When Denver took over the plant of the private water company, the payroll expenses for a half month were \$10,632. There were 262 employees. Between March and March 15 this year—two and one-half years later—the payroll was \$24,824 and the number of employees was 563.

Endless duplication in cost of administration, with consequent extravagance, is one of the causes of increasing taxation.

The rapidly increasing cost of government is due largely to the number of public agencies that have authority to levy taxes. The Federal Government appropriates for purposes that properly belong to the State, while the State government appropriates for purposes that should be taken care of by local communities.

With the rapid increase in the army of public employees as witnessed in recent years, our population will soon be aligned in two classes—those holding public office and those working to support the office holders. From that condition it is but a step to the soviet form of government.

In Memoriam **Dr. George F. Butler**

In the death of Dr. George F. Butler the profession of America loses one of its most unique and striking personalities.

A medical writer of the first class and a literateur of striking ability, Butler had made

a name for himself of which any man and any profession or calling in life might well be proud.

To know Dr. Butler was a privilege, and to enjoy his friendship was an honor. We were the closest of friends for over three decades and I feel that none knew him better than I.

It is given to few men to write themselves into their work as did Butler. Genial, esthetic, kindly soul that he was, no one can read his writings without feeling the influence of a lovable personality.

No member of our profession was so loved for himself, or had so many warm and appreciative friends and admirers as did Geo. F. Butler. His was a place which in my opinion, no one of my acquaintance can quite fill.

G. FRANK LYDSTON.

RESTRICTING THE PRICE OF DOCTOR'S PRESCRIPTIONS

There was recently introduced in the Illinois Legislature a bill which would limit the price a doctor could charge for an alcoholic prescription to one dollar. This bill passed the lower House by a vote of 80 to 10. It was killed in the Senate because of the foresight of a few men in the upper House.

Personally we are not interested in the subject from the standpoint of the liquor prescription but the underlying principle is most dangerous in its possibilities from a medical standpoint.

The precedent once established would soon be followed by others of equal import. Today it is alcohol—tomorrow it would be nux vomica, and the following day digitalis, and the subsequent day any remedy which falls under the ban.

We are reliably informed that a member of the House of Representatives at the recent session of the Illinois Legislature in speaking of the bill alluded to remarked: "Gentlemen, this bill is the entering wedge. We propose to fix it in the future so that doctors can do no prescribing at all. In other words, if people are to be treated in the future it will be by some method of drugless therapy."

It is claimed that in the 48 state legislatures this year twenty to twenty-five thousand bills were offered, many designed to abridge, control and regulate in one way or another the practice

of medicine to the disadvantage of medicine and the detriment of the people.

Medicine as practiced by state legislatures is fast undermining our cherished institutions. If not checked it will eventually destroy initiative and individuality. Let us hope it will be checked before such culmination is reached. The sooner the public is acquainted with the facts the sooner this check will come, and the smaller the amount of the damage that will be wrought.

HOW DO YOU LIKE THE FOLLOWING DEFINITION OF STATE MEDICINE?

At the meeting of the American Medical Association at Boston, Dr. W. S. Rankin of North Carolina, a member of the Council on Health and Public Instruction, was accorded the privileges of the floor to present the following resolution, which on motion, duly seconded and carried, was referred to the Reference Committee on Legislation and Public Relations:

RESOLUTION DEFINING THE MEANING OF THE TERM "STATE MEDICINE"

WHEREAS, The term "State Medicine" has a liberal meaning so general as to include public practice and policies, some of which are desirable and some of which are objectionable, and,

WHEREAS, The term "State Medicine" has been and is being used, frequently and extensively, with confused and without established meaning, and

WHEREAS, Such use of the term has resulted in and continues to produce much misunderstandings, controversy and antagonism both within the profession and between the profession and the public, now, therefore, be it

Resolved, By the House of Delegates of the Medical Association that to prevent further use of the term with resulting misunderstandings and controversy and to facilitate intelligent discussion and action, "State Medicine" be and is hereby defined as follows:

State Medicine is any practice or policy provided for in the legislative acts of a state which has to do with the prevention or treatment of disease, and among other requirements and provision includes:

1. Legislation that determines who shall be permitted and who shall not be permitted to treat disease and prescribe the conditions under which a person may practice medicine;

2. Legislation which provides institutional treatment and care for the delinquent, the defective and the diseased, including institutions for the feeble-minded, the deaf and blind, the psychopathic and insane, and the tuberculous;

3. Legislation which provides for the education of the general public in matters of personal and public hygiene, giving them a higher appreciation of the value and use of medical science through printed mat-

ter, addresses, moving pictures, visiting nurses and other means of proved educational value;

4. Legislation which provides public laboratories for assisting the profession in the diagnosis of specimens of pathologic material, and further assist the profession by providing and furnishing various biologic products of preventive and curative value;

5. Legislation which provides for sickness insurance, especially as practiced in England, and which provides for panels of physicians who are paid out of public funds, and at rates fixed by the state;

6. Legislation which provides for the reporting by physicians of births, deaths and communicable diseases, and prescribes measures for their control;

7. Legislation which provides for the physical examination of schoolchildren, for the purpose of finding those that suffer from common defect with the view of securing treatment of such defect, both in the interest of the individual child and in the interest of the classes in which he recites and retards;

8. Legislation which provides dispensaries for the examination and treatment of diseases of such prevalent and far-reaching effect on the public health as to constitute large and unnecessary handicaps to social progress, as, for example, dispensaries for venereal diseases, and trachoma and hookworm diseases in certain sections of the country.

A noteworthy feature of the A. M. A. meeting was the fact that a great many public health officials showed a disposition to have the entire practice of medicine taken over by State or National Departments of Health. It was State operation and control of medicine that ruined medical practice in Germany and gave to the people of that country the worst medical service administered in any civilized country in the world.

A NEW MEDICAL JOURNAL

The *International Journal of Gastro-Enterology*, edited by Dr. A. L. Soresi, 220 West 59th street, New York, made its entree this month. It is a novel and interesting publication—interesting in variety of contents artistically displayed, and novel in features that the author admits aroused enthusiastic plaudits of some contributors but caused the withdrawal of other papers "already printed."

The editor's plan, not fully carried out in the first number, calls for original papers to be submitted to commentators who do not know who the author may be, the comment to be printed after the originals, and followed by abstracts in foreign languages, the latter question to be decided by a plebiscite later. The editor makes a clear-cut distinction between original papers

which should contain fully developed ideas in distinction to "preliminary notes" of less developed proposals. It was this classification by the editor of the papers presented for his first issue that nearly wrecked it.

Experimental Medicine claims a section as well as the usual Reviews, Abstracts, Comments, etc. The most impressive contribution in this issue is the Editor's article on "Radical Physiological Treatment of Cancer of the Stomach." Other leading articles by Drs. E. J. Carey, Frank Smithies and H. E. Radasch, with comments by several prominent specialists, complete a valuable number. A long list of prospective contributors, American and foreign, gives promise that the publication will not fail to maintain its high standard.

As no publisher's name appears, it is safe to assume that Dr. Soresi has the burden of publisher as well as editor—some load in these days of high cost and other difficulties. It may also be assumed that Dr. Soresi operates on his patients instead of "operating them," as he naively admits. In a long editorial, "Our Program," which spread over the back cover, the editor develops his plans in detail. These include the organization of an International Association of Gastroenterologists, an Open Clinic and Laboratory for the Study of Gastro-Enterological Problems and other features. A prominent place is given to the following statement: "Constipation does more harm than tuberculosis and can be completely prevented." This is certainly important if true.

Founding a publication that is evidently intended to be eventually the official organ of a society not yet organized may have decided advantages in the way of defining future policies—but it is novel, at least.

ACCIDENT INSURANCE COMPANIES ARE NOT PLAYING FAIR

Chicago, June 21, 1921

To the Editor: Eleven years ago I was insured in the Pacific Mutual Company, in the accident department. October 1st I met with a minor accident from the back firing of an automobile. This resulted in the formation of a perineal abscess, followed by generalized infection that gave me practically five months total and partial disability.

A claim was made on this Company, and all I have met with was evasions. I consider their methods of doing business not straightforward and business like.

They promptly refused to renew my policy, but evade any question of payment on my policy.

Many physicians are carrying these policies and I would like to get in touch with others who have had a like experience with any insurance company.

The insurance reform association is now in process of organization, and when things get a little further along we expect to introduce a little decency in the claim department of the companies doing business in this State.

There is no good reason why physicians should pay perfectly good money to bunco artists and get a lawsuit instead of the wise provision they thought they were making in times of stress.

G. G. B.

THE CHEMISTS OF THE COUNTRY ALARMED

MANY IMPORTANT INDUSTRIES ARE NOW CONFRONTED WITH THE SUPREME TEST. THE DUTY OF THE HOUR IS TO WRITE OR TELEGRAPH A PROTEST TO YOUR SENATORS AND CONGRESSMEN.

NEW YORK SECTION

THE AMERICAN CHEMICAL SOCIETY

New York Section, June 25, 1921.

To the Editor: The chemists of the country are becoming thoroughly aroused over pending legislation in Washington. Not only is this pending legislation of vital interest to the chemists but it will seriously affect the medical profession if it is enacted into a law.

Believing that we should be united in our opposition to this measure, I am enclosing a brief statement which may be of interest to you and your readers and which I hope you will give some publicity.

Yours very truly,

B. R. TUNISON,

Secretary of the Committee on Industrial Alcohol.

THE SUPREME TEST

Manufacturers throughout the country are confronted with the most dangerous situation of this generation.

It is more than a crisis. It is a drive for the jugular vein of many leading industries. If this characterization is regarded as sensational, let any business man

examine the so-called Volstead "anti-beer" bill, known in the official records of the House of Representatives at Washington as H. R. 6,752.

The average business man, who has read in the newspaper dispatches from Washington that an "anti-beer" bill was pending, has seemingly shrugged his shoulders. Few, if any of them, have given a thought to the possibility that the measure affected them in the slightest degree.

Yet this very bill spells more disaster to the industries of this country than any other proposal in years. It is true that the seeming purpose of the latest Volstead bill is to upset previous rulings concerning beer as a medicine. If it stopped there, no substantial objection could be offered against it.

Under the cloak of preventing the use of beer as medicine by physicians, H. R. 6,752 would permit any chemical or other manufacturing industry, using or depending upon alcohol to be shut down within thirty days. And what is more dangerous, no appeal could be made to the courts.

That is only one provision of the proposed new law. Another section would require the posting of permits for twenty days before this basic chemical for many industries could be secured. Power is also given to compel the posting of a copy of the application upon the factory or business house. Then any one of a group of local, state or national officials may file a protest to it. By the time the red tape involved was unsnarled, any reputable company, concern or corporation might be in the hands of the sheriff or the federal courts in a bankruptcy proceeding.

If any more sensational or autocratic procedure is possible, the scene of it would probably be located in Russia or some other remote center of governmental disorder.

Fortunately, the bill has not passed the House. But the danger is acute. It may be passed within a few days, unless the manufacturers of this country make a protest. The first step has been taken. It was inaugurated by the New York Section of the American Chemical Society. A protest has been made to the Rules Committee of the House of Representatives. It is directed at H. R. 6,752.

Many important industries are now confronted with the supreme test. If a group of fanatics can jam this bill through now, while the leading manufacturers of the country have been lulled to sleep, anything is possible. The duty of the hour is to write or telegraph a protest to your senators and congressmen today against this real menace to American industries.

CAN LAYMEN CHANGE U. S. P. FORMULAS WITHOUT CONSENT OF DOCTOR OR DRUGGIST?

New Ruling, Altering Formula on Jamaica Ginger,
Establishes Precedent Pregnant with Danger,
Members of the Revision Committee Believe

For one hundred and one years the determination of the strength of medicinal agents of standard use employed in the practice of medicine has been exclusively

a medical and pharmaceutical function. By acts of Congress enacted at various times from the earliest days of the Government this function has been recognized. In the framing of the Pure Food and Drug Laws under the administration of Theodore Roosevelt, U. S. P. standard was formally made Government standard.

With this standard no layman for 100 years has ever been permitted to interfere. In Washington, D. C., last year, at the celebration of the first centennial of the organization of the U. S. P., a committee composed of 17 leading physicians and 33 pharmacists was elected to revive the eleventh decennial issue of the pharmacopoeia, and this committee is now busily engaged in this work.

Recently, without consulting the committee, the Internal Revenue Department at Washington issued an order requiring that hereafter Tincture Jamaica Ginger, U. S. P., must contain 40 grains of ginger to the fluid ounce, instead of 20, as prescribed in the pharmacopoeia.

Whether Tincture Jamaica Ginger contains 20, 40 or 60 grains of ginger is relatively unimportant to medicine. But it is important that laymen shall not be permitted—over the heads of the physicians and pharmacists charged with the maintenance of U. S. P. standards—to lay their hands on this compendium of official formulae and change them to suit their judgment and caprice.

If the laymen of the Internal Revenue Department can alter one U. S. P. formula, built and approved out of the best medical experience in the country, they can alter others when it pleases them.

In effect this means that laymen, without knowledge of medicine or the therapeutic effect of drugs, can supersede the judgment of physicians and fix a strength for U. S. P. preparations wholly different from what physicians believe is proper for the needs of their patients.

By the same exercise of power, the strength of any other tincture or fluid extract in which alcohol is used as a solvent and preservative may be changed as readily as Tincture Jamaica Ginger.

If a U. S. P. preparation is suitable for other than medicinal use, its sale can be restricted by regulating that it shall be sold only on physician's prescription. This is a proper regulatory function of laymen charged with law enforcement, if the circumstances warrant the exercise of such power in any case.

In the case of Tincture Jamaica Ginger, the first order issued so ruled. Subsequently the rule was amended to allow the continuance of the sale of the tincture without prescription, providing 40 grains instead of 20 were used.

Doubling the strength of ginger prescribed in the U. S. P. formula makes it contrary to U. S. P. standard. In this particular case physician members of the U. S. P. revision committee are not disturbed, but in the exercise of such power they see a dangerous precedent established. Where will it stop?

—*Pocket Quarterly.*

IS IT BETTER TO KEEP PATIENT IN THE DARK WHEN PRESCRIBING?

EXCERPTS FROM A LETTER IN WHICH ST. LOUIS DRUGGIST ASKED DOCTORS TO IMPROVE PRESCRIPTIONS

The Retail Druggists Association of St. Louis decided the average doctor needs a bit of coaching in prescription writing. Whereupon its propaganda committee wrote a letter to the doctors suggesting certain changes in the practice of writing prescriptions. Excerpts from the letter as it appeared in the *St. Louis Post Dispatch* is as follows:

Dear Doctor: We beg you to spare a few moments of your time to the perusal of the following suggestions, and hope that the suggestions will be received in a co-operative spirit.

Do not prescribe a "white powder" or a "simple" remedy; it is generally advisable to add an inert ingredient, in order to change the appearance of the preparation. The following of this practice will induce the patient to consider the remedy of greater importance.

When prescribing liquid medicines it is not advisable to prescribe colorless preparations.

If liquid "proprietarys" must be prescribed they should never be ordered without changing their physical appearance, taste or smell.

"TOO MANY HOUSEHOLD REMEDIES."

External medicines of a proprietary nature should be changed. The carrying out of these suggestions will in a measure prevent the promiscuous advertising of proprietary preparations through the indirect agency of physicians. As it is today, there are too many of this class of remedies which have become "household remedies" through having been prescribed by physicians.

In prescribing, liquid medicines should have the preference; next in order "shake remedies," then remedies in powder form, in cachets, "freshly made" pills, and finally the capsule.

To prescribe "factory-made" pills, tablets or capsules only, or continuously, may lead patients to believe that too much "routine" treatment is practiced; variety in prescribing will tend to educate the patient to believe that the physicians is "up" in materia medica and is giving the case his individual attention as well as individual medication.

"PHONE" PRESCRIPTIONS OPPOSED

Do not prescribe by telephone unless it be to the pharmacist; patients are not willing to pay for such consultations, believing that the case is not of a serious nature.

Do not prescribe 5 cents or 10 cents' worth of a medicament; it seems unprofessional to some, as much so as getting a half dollar's worth of legal advice would be. It cheapens both you and your profession and leads to errors and misunderstanding.

If a simple medicament must be prescribed, e. g.,

aspirin, veronal, phenacetin, sodium bicarbonate, sodium phosphate or remedies of that character, some essential oils, such as oil of peppermint, wintergreen, anise, orange, lemon, etc., might be added; this will improve the taste and also prevent guessing what the doctor has ordered, a great game with many shaping patients.

It is sometimes well not to inform the patient what is ordered for him; sometimes patients are prejudiced to taking certain remedies or it may happen that the patient will say, "Why, doctor, I have tried that already; my sister or brother told me of it." This would be surely humiliating to you.

TO SAY NOTHING DISPLAYS WISDOM

The prescribing of "cipher prescriptions" should not be engaged in; it may reflect upon the physician so doing; it creates distrust with the patient when a pharmacist who cannot compound it resents this action of the physician.

If requested by the patient to make an estimate of the cost of medicine, it may not be politic to do so. The physician can decline with good grace, stating that he is not conversant with the present value of drugs. To say nothing at times displays most wisdom.

Many patients have more faith in larger quantities; they do not believe in small doses; tablespoon doses would appeal more to some than teaspoon doses or drop doses.

So-called "shot-gun" or polypharma prescriptions may impress the patient as being obliged to "take the whole drug store." The more intelligent patients may presume that the physician has not made a definite diagnosis and is groping in the dark.

IMPRUDENT TO FORECAST EFFECT

It is not always prudent to tell the patient how the prescribed medicine will "act"; conditions with different patients sometimes show contradictory results. Should a medicine not act as you have told the patient, he may conclude that either the pharmacist or you have committed an error.

Before prescribing a proprietary remedy consider if the United States pharmacopoeia or national formulary does not supply a similar preparation. It is more professional and ethical to prescribe U. S. P. and N. F. To prescribe proprietary remedies aids materially in creating "household remedies," which are handed down from generation to generation and simply take the bread out of the physician's mouth.

Should there be a question regarding incompatibilities it might be well to consult the pharmacist, who will cheerfully assist you, because the pharmacist should and does excel in the knowledge of chemistry, whereas the physicians does excel in therapeutics. In fact, co-operation between the medical and pharmaceutical professions will redound to the benefit of both. Fraternally,

THE PROPAGANDA COMMITTEE OF THE
RETAIL DRUGGISTS' ASSOCIATION OF ST.
LOUIS.

DOCTOR, DO YOU VALUE YOUR THERAPEUTIC LIBERTY?

THE VOLSTEAD ACT CONTAINS THE MOST DRASTIC LEGISLATION AFFECTING THE MEDICAL PROFESSION YET ENACTED.

THE DOCTOR IS DENIED HIS CONSTITUTIONAL RIGHT OF TRIAL BY JURY. TODAY IT IS ALCOHOL, TOMORROW IT MAY BE ANY REMEDY WHICH FALLS UNDER THE BAN.

To the Editor: The purpose of this letter is to bring to the attention of the physicians of the country the significance of recent and pending legislation affecting their liberty in the selection of remedies. While the restrictions of the Volstead Act form the basis of the letter, we wish distinctly to disclaim any intention of initiating among physicians a propaganda for or against prohibition. In fact, from the present point of view, it is immaterial whether a physician does or does not believe in prohibition. The point at issue is the right of the physician to select his remedies and to decide what doses of these remedies each patient requires.

The Volstead Act denies this right. While recognizing the medicinal value of alcohol, it says to the physician, "Thou shalt not give more than a pint of whisky (or brandy) to any patient within ten days." Further than this, recent interviews given by persons interested in promoting similar legislation contain the threat to prohibit altogether the medicinal use of alcohol. While there is difference of opinion among the physicians of the country with respect to the therapeutic value of alcohol, the number of those having faith in it is sufficiently large to receive attention.

The medical restrictions of the Volstead Act constitute an indictment of the integrity of the whole profession, in that it is assumed that many of its members, unless restrained by law, will pander for gain to the people's desire for drink.

Under the provisions of the Volstead Act, physicians who believe in the therapeutic use of alcohol are debarred from the practice of their profession with respect to patients who in their opinion require more than one pint of whisky (or brandy) within ten days (the equivalent of about 1½ ounces a day) since the statute states, "Any person violating the provisions of any permit . . . or who violates any of the provisions of the law shall be fined for the first offense. . . . If a permittee is guilty of wilfully violating the law . . . permit will be revoked and will not be reissued to such person within one year thereafter" [italics ours]. We have been told, however, at the office of the Prohibition Directory in New York City that he (the director) may, in his discretion, permit physicians to continue to treat patients who require alcohol.

Another provision of the Volstead Act reads that "Physicians may not prescribe liquor for their own personal use, and pharmacists should refuse to fill any such prescription presented to them." In other

words, a physician who is ill and needs alcohol is prevented by laws from obtaining it unless a fellow practitioner with a permit to prescribe it is near by.

In some sections of the country, especially in rural districts, it is impossible for physicians to prescribe alcohol, though they may hold licenses, because local conditions prevent druggists from carrying it in stock.

Further, it should be pointed out that the Volstead Act contains the most drastic legislation affecting the medical profession yet enacted. A physician becomes a criminal by the mere fact of writing a prescription for more than a pint of whisky for one patient within ten days, and, so far as the revocation of his permit is concerned, is denied his constitutional right of trial by jury. (This interpretation of the law is supported by competent legal opinion.) The law states that "After a permit has been revoked by the Commissioner, the permittee may have a review of the decision before a court of equity. During the pendency of such action such permit may be temporarily revoked."

The precedent established by the Volstead Act in restricting medical practice should, if physicians value their therapeutic liberty, be met with a protest which will command attention. Today it is alcohol, tomorrow it may be any remedy which falls under the ban.

We would suggest that the physicians of the country write to their Senators and Representatives in Congress in terms which leave no doubt with respect to their attitude concerning the regulation of therapeutic procedure by statute.

CHARLES L. DANA, M.D.,
SAMUEL A. BROWN, M.D.,
SAMUEL W. LAMBERT, M.D.,
ROBERT A. HATCHER, M.D.,
HERMANN M. BIGGS, M.D.,
HARLOW BROOKS, M.D.,
WALTER B. JAMES, M.D.,
GEORGE B. WALLACE, M.D.,
WARREN COLEMAN, M.D.,
New York.

A BUST OF MORTON FOR THE HALL OF FAME—SEND YOUR CONTRIBUTION NOW.

In the election of Dr. William T. G. Morton to the Hall of Fame the allied professions of medicine and dentistry have been singularly honored. By their overwhelming vote the electors have also evidenced the appreciation of the public at large for the beneficence of anesthesia.

Recently, at the annual dinner of the American Anesthetists in Boston during A. M. A. week, Dr. S. Adolphus Knopf, the elector most responsible for the honoring of Morton, said it would be a proud privilege for the Associated Anesthetists to place a bronze bust of Morton in the niche assigned him by the electors. This is to be done in celebration of the Diamond Jubilee Anniversary of Morton's Demonstration of Ether Anesthesia.

The Associated Anesthetists, as well as other prominent leaders of the allied professions, are, therefore,

urging all those interested to make a substantial contribution for this purpose.

Send your check or money order at once to

F. H. McMECHAM, M. D., Sec'y.-Treas.,

Associated Anesthetists,

Lake Shore Road, Avon Lake, Ohio.

THE DANGER OF STATE SOCIALISM IS GRAVE AND PRECAUTION SHOULD BE TAKEN TO PREVENT ITS SPREAD.

THE STRAIN RUNNING THROUGH PRESENT LEGISLATION IS DANGEROUS TO REAL DEMOCRACY, TO STATE RIGHTS AND EVEN THE LIBERTY OF THE INDIVIDUAL.

The Towner bill for the creation of a federal department of education, the Sheppard-Towner maternity bill for the lending of federal aid to the women of the nation in caring for their children, and the Kenyon bill for the creation of a federal department of public welfare are all chips of the same block. There are other such chips in the congressional woodlot, but these in particular have attracted nation-wide attention.

The block may be termed state paternalism, or, if one has the courage to call things by their correct names, state socialism. The strain running through this sort of legislation is dangerous to real democracy, to state rights and their exercise by the individual states, and even the liberty of the individual. While considerable opposition directed against proposed legislation of this character has come from doctors, they are by no means the only men and women in our country challenging the prudence or correctness of this sort of laws. In an address delivered on Feb. 12th in the senate, Senator King of Utah declared that others shared in this opposition and that opponents took ground that should appeal to all patriotic Americans—the position that individual liberty and state and local government must be preserved inviolate from federal invasion or usurpation.

On May 12th Senator King again had occasion to condemn the tendency evidenced in legislation favoring federal direction of action by the states and the local communities; still worse, usurpation of state and local functions. According to the *Congressional Record* (May 12, p. 1331), Mr. McKellar, senator from Tennessee, spoke in favor of the Towner education bill, whereupon Mr. King pointed to the dangerous tendencies involved in such legislation. The *Record* reports:

"Mr. King—Mr. President, there are so many controversial questions before us now that I shall not undertake to precipitate another by engaging in a discussion with the senator from Tennessee. I shall only express my regret that he has *indorsed a policy which is at variance with democratic principles*, and has confessed the failure of democratic institutions in our form of government. *His position is a condemnation of the states and an indictment of the capacity of the people to govern themselves.*

"In my opinion the states will measure up to the requirements placed upon them. The people are com-

petent to handle their local and domestic affairs, and when fully acquainted with the question involved in this plan to project the federal government into the local concerns of the states, they will repudiate it and call upon their respective states to fully discharge any and all obligations devolving upon them. There will be no confession of state degeneracy and the necessity of aid from the federal government in order that the people and the sovereign states may perform the duties which they have voluntarily assumed. If Tennessee has failed in any respect in the past, I am sure that the patriotic people of that great state will make full amends in the future. I know the courage and spirit of the sons and daughters of Tennessee. They ask for no benefactions and largesses from the federal government in order that they may be relieved of duties which rest upon their state. Moreover, *any contributions made by congress must be taken from the people*, including the residents of Tennessee. They can collect their own taxes and expend the same better than the bureaucracy of Washington. *The duties and functions of the state are clear, and there has not been granted to the general government the power to control education or tax the people for domestic matters.* The federal government has only *delegated powers*, and it may not transcend them.

"I am sorry to see my good friend depart from sound democratic principles and declare his support of politics which rest upon bureaucracy and *paternalism and which in time will eventually change our form of government.*"

Senator King has thus once more stated the position taken by many doctors and others as citizens in opposition to the Towner bill. It should be borne in mind that all legislation should be viewed from this angle. The danger of state socialism is grave and precautions should be taken to prevent its spread.

FANATICISM OR REFORM?

LEGISLATION SPONSORED BY FANATICS IS BREEDING WIDESPREAD REACTION. IT IS A FACT THAT A FANATIC FEEDS ON THE EXERCISE OF A POWER CIRCUMSTANCES GIVE HIM AND BECOMES INSATIABLE IN DOMINATION.

Congressman Volstead, who was author of the drastic act applying the eighteenth amendment, chews tobacco. At least that is the assertion of certain wags who have recently called his attention to a specimen containing a percentage of tartar emetic.

Mr. Volstead has not publicly denied the habit and a great many people will ponder the matter with some sense of the irony of law making. A legislator who wishes to make punishable the prescribing of beer by a physician who believes it will benefit a patient is found to be given to the consumption of a drug and to a practice which can hardly be justified from either the standpoint of the victim's health or that of public comfort.

We do not care to labor the point. We ourselves think tobacco chewing is unpleasant if not deleterious. If we were of the extremist prohibitionists we should

demand a law prohibiting any one from indulging the habit. But the Volstead incident is worth noting as one of the many signs that the fanatical extremes of teetotalism are breeding a widespread reaction. The resignation of the chief counsel to the federal prohibition commission is a plain portent. Mr. Van Buren is a prohibitionist and he reports that "from all over the country professional and business men, ardent supporters of prohibition against beverage liquor, generous contributors to the cause and among the drier of the dries, protest against further encroachment upon rights guaranteed in the pursuit of lawful occupations."

The truth of the situation is thus very clearly summarized. Fanaticism cannot be accepted by the American people and will not be. But it is a handful of fanatics who are now dictating legislation under the eighteenth amendment. Mr. Van Buren protests against the further curtailment of personal liberty by these "abusive and ruthless restrictions" and he will be supported not only by opponents on principle of prohibition but by every believer in its expediency who can see beyond the tip of his nose. The passage by the house of representatives of the bill prohibiting medical prescription of wine or beer will not strengthen the eighteenth amendment.

The economic and social benefits of prohibition are undeniable, although many Americans believe they are purchased at a price too high from the viewpoint of the principle of individual freedom and responsibility. But a majority of the American people are in all probability favorable to a trial of its merits and, if they are found to outweigh objections, will approve its permanent establishment as a principle of social well being.

But this does not satisfy either the fanatic or the professional agitator, whose occupation would be gone, in this field at least, if prohibition should be adjusted to public opinion and should thus cease to be an issue for propaganda and legislation. It is the commonest fact that the fanatic feeds on the exercise of a power circumstances give him and becomes insatiable in domination. It is equally true that the demagogue is always among the extremists and to keep his power must vie with them in the violence of his demands. Revolution beginning as reform almost always passes through a crescendo from moderation to the violence which destroys itself.

Prohibition under the control of a few fanatics and professional agitators is rapidly passing into the suicidal stage. Its ruthless enemies may welcome this folly, but no one who understands and regards the general welfare of our country or is willing to take account honestly of any benefits which can be derived from sensible restrictions of the great evils of the liquor traffic can be anything but disgusted if not alarmed by fanatical excesses. Prohibition already has put a dangerous strain upon the respect for law. It is resented by at least a very large minority of the people as an improper invasion of private right. Inflame this feeling by an excessive and oppressive ap-

plication and results will be serious. No group of fanatics and self-seeking agitators should be permitted to bring this misfortune upon the American People.—*Chicago Tribune*, June 29, 1921.

TO WHOM DOES THE WASTE MATERIAL FROM OPERATIONS BELONG?

THE CASE OF CUSACK VS. MORRIS

TO THE EDITOR: On the way to the meeting of the American Medical Association with a group of doctors bound for Boston, I find a general expression of regret that the details of the suit against me have not become available, as the case was discontinued. A number of important points were involved.

Some years ago I presented at a meeting of the Surgical Society in New York a man who had lost both testicles in youth as a result of mumps. There was no sex power or feeling. A small graft had the peculiar effect of stimulating the remains of one testicle into development, although the graft itself was absorbed. The patient gained sex power and married.

Three years ago a patient, Mr. H., came to the Post Graduate hospital for removal of a small tumor of the leg. He had undeveloped testicles although he was a man in good health and since that time has been married. It occurred to me, having the former case in mind, that a graft of testicle tissue might stimulate the development of the testicles with the effect of perhaps lowering his voice at least, through enzymic response. I told him that if he would come to the hospital on some occasion when I had trimmings from a hydrocele operation I might try these for endocrine effects. Some time later a patient, Mr. Cusack, was sent to me by his family physician for an operation for double inguinal hernia and hydrocele of the right side.

Many years ago at the Ithaca Hospital after a Bergmann operation for hydrocele there was a return of the condition a year or so later. At the first operation I had removed only the parietal layer of the sac. At the second operation to insure a radical cure I removed the visceral layer, marked off lines with a scalpel and then with curved scissors removed peritoneum and found that no harm was done if some of the tunica albuginea and adherent tubules were included here and there among the trimmings. Since that time I have regularly done this addition to the Bergmann operation.

Knowing that we were to have trimmings of this sort I asked Mr. H. to allow me to use some of the material, small pieces of which, including several kinds of structure, were inserted in the abdominal wall beneath the sheath of the rectus muscles. Incidentally it may be remarked that in this case the tissue was absorbed after the operation. In the case of Mr. C. the hernial and hydrocele wounds had become healed to such a degree at the end of a fortnight that I informed him he might return home on the following day. Incidentally there had been a collection of brownish fluid at the hydrocele site, which I took to be ordinary serous oozing, at the time when it was

withdrawn with the needle. I then left town for a Medical Society meeting at a distance. In my absence it was found that an infection was under way at the hydrocele site with the formation of an abscess. Because of the late development of this complication it was presumed to be a catgut infection.

My colleague on the staff, Dr. S., who had a patient in the next room, was called in to help out with my patient in my absence. He opened the abscess and incidentally asked another colleague, Dr. E., to be present at the operation. Dr. S., Dr. E., and I had previously had a good deal of controversy over the employment of rubber gloves in surgery. In this particular case I had worn gloves, as they are discarded in my abdominal work only, for reasons stated in various published contributions on the subject. The result of the abscess on the right side was a defect in contour which may be remedied. There is no loss of virility.

The patient gained the impression that I was responsible for his trouble and through Mr. Leo Levy brought suit for felonious assault and \$250,000 damages. Mr. Levy began proceedings in a way which displeased my counsel, Mr. James Taylor Lewis, then counsel for the New York State Medical Society. Because of this legal hitch the case passed into the hands of Mr. Cornelius J. Smyth. Mr. Smyth, examining into the various features, found it desirable to call Mr. George Gordon Battle to his aid.

Mr. Battle having examined me in advance of trial in the presence of the plaintiff and others interested, decided that it was a case which he did not care to try. Mr. Smyth next called in Mr. W. J. Fallon. The case has now been discontinued on the request of Mr. Cusack, who learned the real facts for the first time when Mr. Battle made the preliminary examination before trial.

It is necessary to correct several points of misconception which have been widespread and of which I have heard not only from various parts of this country but from abroad. It was said that Mr. H. paid me a large fee for the grafting operation. Mr. H. paid me nothing at all for this, as it was simply a bit of side experiment made at a time when I hoped to be of service both to Mr. C. and to Mr. H.

It has been said that I paid a large sum of money for discontinuance of the suit. I have paid nothing at all for this. On the other hand, my counsel, Mr. Lewis, will be witness to the fact that I have urged him during these three years to bring the case to trial at the earliest possible moment. My witnesses in the case were members of the Surgical Society, doctors who assisted me previously and at the time when I did this particular form of hydrocele operation and doctors who had adopted the same form of operation themselves. The witnesses against me were two doctors whom I did not know personally. They were paid \$150.00 each for examining the patient and they are said to have received their information about the case from a doctor who was not present at the operation. There was no question in my mind of bad faith

on the part of these two doctors who were to have been witnesses against me.

Legal points in the case relate to the employment of waste materials without the consent of the party from whom they were removed. Skin, bone, and other tissues are so frequently used in this way that it was believed that the point would not require adjudication. —*Medical Record*, June, 1921.

ROBERT T. MORRIS, M. D.

616 Madison Avenue, New York.

AMENDED SEARCH AND SEIZURE ACT BARRING USE OF WINE AND BEER IN ILLINOIS PASSED

The Anti-Saloon League's bill Supplementing the Search and Seizure Act was passed by the House on June 8th, and is now with Governor Small for his approval.

The measure is far more drastic than the Volstead law or than the original Search and Seizure Act.

WHISKY ON PRESCRIPTIONS

The use of medicinal beer, light wines and other intoxicants except non-beverage distilled spirits is abolished. Whisky, brandy, gin, etc., may be obtained on prescriptions under the same conditions as heretofore.

Search and seizure powers are given by the new law and injunction writs may be sued out without bond on five days' written notice. Vehicles in transporting intoxicants may be confiscated and the court may order that the room, house, building or other structure where the violation occurred be not occupied for one year.

Persons found guilty of violating injunctions are liable to \$500 to \$1,000 fines, or imprisonment for ninety days to ten months, or both fine and imprisonment.

Makers, sellers or transporters of intoxicants shall be fined from \$100 to \$1,000 or imprisoned from sixty days to six months for a first offense. For a second violation the penalty is a fine of \$500 to \$1,500 and imprisonment in the penitentiary not less than one year or more than two years.

Similar penalties are provided for violating the provisions governing the use of permits.

MAKES LITTLE CHANGE FOR DRUGGISTS

This bill is aimed primarily at the bootleggers and aside from forbidding the use of wine and beer for medicinal purposes (the use of beer being only a possibility from the federal standpoint) will not alter conditions as regards the average retail druggist. Wine can still be used in the manufacture of U. S. P. and N. F. preparations.

THE PHYSICIAN WHO THINKS FIRST OF HIS FEE IS A RARITY

The alleged rapacity of doctors is one of the meanest of libels. It is contradicted by common knowledge and everyday experience. The physician who thinks first of his fee is a rarity.

The young woman of Trenton who was ready to

sell herself in marriage for \$1,000 to pay for an operation on her mother need only to have gone to the nearest hospital and not a cent would have been asked. A Brooklyn doctor two days ago got up from a sick-bed to take a bullet from the brain of an insane prisoner. His fee was nothing.

From the time of Galen the medical profession has been the butt of jesters. Most of the jokes are variants of "The surgeon buries his mistakes." Addison, in *The Spectator*, thought it good humor to write: "We may lay it down as a maxim that when a nation abounds in physicians it grows thin of people * * * This body of men in our country may be described like the British army in Caesar's time. Some of them slay in chariots and some on foot. If the infantry does less execution than the charioteers it is because they can not be carried so soon into all quarters of the town and dispatch so much business in so short a time."

Yet there were doubtless fifty doctors in London who would have given their days and nights to Addison though he hadn't a guinea to pay.

It is only in modern letters that we find real appreciation of one of the noblest of professions—in the poems for example, of William Ernest Henley, who knew what it meant to be In Hospital. It is good to feel that these lines from his sonnet "The Chief" truly express a sentiment that is general today:

If envy scout, if ignorance deny
His faultless patience, his unyielding will,
Beautiful gentleness and splendid skill,
Innumerable gratuities reply.

Doctors are no doubt lower than the angels, but in whose daily labor is there more of unselfish service to fellow human beings?—*Guthrie Leader*.

Public Health

ADDITIONAL HEALTH OFFICERS IN STATE SERVICE

An important measure enacted by the fifty-second general assembly is the provision for approximately twenty-five state health officers to be known as district health superintendents.

If active, energetic men with good training and experience are selected for the district health superintendents, there ought to be a marked increase in the efficiency of public health administration in this state, and a considerable improvement in the public health.

BETTER BABIES CONFERENCE ANNOUNCED

The State Department of Public Health announces the dates for the sixth annual Better Babies Conference to be held in connection with the Illinois State Fair at Springfield, August 19-27, 1921. Arrangements have been made for examining at least 1,000 children and ample provisions made for the comfort and safety of mothers and children.

All examinations will be made by specialists in infant and child welfare.

The Conference is primarily an educational institution and is so conducted. The rules prohibit the giving of treatments or prescriptions. On the other hand, the attention of parents is directed to the proper procedure to take for correcting defects and caring for their children through a consultation service that will be maintained throughout the Conference.

DEPARTMENT NOTES

A severe outbreak of scarlet fever made its appearance in Galva, a little town of 3,000 people, during the early part of this year. The epidemic reached its peak in May, during which month 63 cases were reported.

Rather sharp outbreaks of smallpox have occurred in several communities during the past few months. In some instances the epidemics reached serious proportions due to the diagnosis of primary cases as chickenpox and the consequential failure to resort to vaccination.

Two new motion picture films, "The Long vs. the Short Haul" and "The Trump Card," have been added to the loan service of the department. Films are available to local communities without cost except for transportation charges one way.

The mailing list for "Health News" is being revised. If you have not received a card in reference thereto, write to the department at once if you want your name to remain on the list.

A new catechism on Poliomyelitis (infantile paralysis) has just come from the press. The questions and answers appear in simple language and cover the subject very inclusively. This catechism was prepared by the State Department of Public Health for the benefit of physicians and others who may be interested. The basis for the information that appears in the catechism has been gained through the operation of a large number of clinics (now 25) that have been conducted regularly throughout the state during the past four years for the after-care of victims of infantile paralysis. Those who wish a copy of this circular may obtain the same upon application to the department.

The department has just received for distribution 2,000 copies of a bulletin entitled "An Outline for a Birth Registration Test." Those interested in assisting the department to obtain complete birth reports may obtain the pamphlet by request.

A TRAGIC BLUNDER

(Continued from page 48)

of experience and scientific knowledge, and to substitute for these, as something better, their own methods of treatment for a helpless child. And so another little life was needlessly sacrificed on an altar of human belief. They virtually decreed that this child should die, for the reason that they offered it no chance to live.

—*Bulletin, Chicago Department of Health.*

Book Reviews

MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM, WITH A PRACTICAL CHAPTER ON PHOTOTHERAPY. By Sinclair Tousey, M. D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Third edition, thoroughly revised and greatly enlarged. Octavo of 1337 pages with 861 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1921. Cloth \$10.00 net.

This work has gone rapidly through three editions, indicating its popularity. Electricity as applied to the science of radiography, changes rapidly. Important advances have been made in gastro-intestinal radiography and in the standardization of apparatus and technic. This work has brought the subject up-to-date so far as it is possible under changing conditions. This work should be in the hands of every doctor interested in radiography.

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel M. D., Sc. D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M. D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania. Seventh edition, reset. Octavo of 1111 pages with 509 text illustrations, many in colors, and 13 colored plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$8.50 net.

The fact that this work has gone through seven editions in rapid succession speaks volumes in its favor. This edition follows the style of previous issues, much new matter has been added and extensive revision of every section has been made in order to keep pace with pathologic knowledge obtained of late years. Some entirely new sections have been added; several important headings such as those dealing with nephritis, influenza and lymphomata have been rewritten.

TUBERCULOSIS AND HOW TO COMBAT IT. By Francis M. Pottinger, M. D., St. Louis. C. V. Mosby Company, 1921. Price, \$2.00.

This book is intended for the patient. There is much to be gained by an intelligent understanding of disease by the patient. This is especially true of tuberculosis. An understanding of the cause of the disease as well as the conditions and mode of life that will best tend to bring about recovery is essential in treating tuberculosis. The work meets the intention of the author.

PHYSICAL DIAGNOSIS. By W. D. Rose, M. D. Second edition, 309 illustrations. St. Louis: C. V. Mosby Company, 1921. Price, \$8.50.

The first edition of this work was rapidly exhausted, calling for a second revision. In this volume the text has been largely written and supplemented by new material which brings the recent advances on this subject up to date. The chapter dealing with the X-

Ray as an aid in diagnosis has been revised and amplified.

OPERATIVE SURGERY. By John J. McGrath, M. D. Sixth revised edition. With 369 illustrations, including full page color and half tone. Philadelphia: F. A. Davis Company, 1921. Price, \$8.00 net.

This work of 863 pages and ten parts, Part I dealing in general considerations; Part II, Head and Face; Part III, Neck and Tongue; Part IV, Thorax; Part V, Abdomen and Back; Part VI, Rectum; Part VII, Hernia, Spermatic Cord, Testes, etc.; Part VIII, Urinary System; Part IX, Upper Extremity; Part X, Lower Extremity. The work contains a good index, is well written, up to date and will prove a great assistance to surgeons.

A LABORATORY COURSE IN SERUM STUDY. Bacteriology 208. By Hans Zinsser, M. D., J. G. Hopkins, M. D., Reuben Ottenberg, M. D. Second revised edition. The Macmillan Company, New York

In this work there are a number of important changes in protocols and technique which have been made on the basis of experience. Most of these exchanges are in the form of alterations in the plan of experiments, making them more easy to perform and more illustrative of underlying principles.

HUMAN HEREDITY. By Casper L. Redfield, Chicago. Heredity Publishing Company. 1921.

This work deals with the evolution of the human being. It gives a historical review from rise of man of savagery to civilization and brings out many facts which throw a new light on human evolution.

HARROWER'S MONOGRAPH'S ON THE INTERNAL SECRETIONS. Hyperthyroidism (Medical Aspects). Glendale, California. Subscription price per year, \$3.00.

Internal secretions is a live subject at the present time and the subject is treated in this work by a master of the subject of Internal Secretions.

KEEN'S SURGERY. Volume VIII. By Surgical Experts. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S. Eng. and Edin., Emeritus Professor of the Principles of Surgery and Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo of 960 pages with 657 illustrations, 12 of them in colors. Philadelphia and London: W. B. Saunders Company, 1921. Price: Volume VII and VIII and Desk Index Volume Cloth, \$25.00 net per set. Sold by subscription.

This work consists of 65 chapters. The contributors are the best known men by the best known surgeons in the United States. The nation-wide character of many of the contributors is a sufficient guarantee that the work represents the last word in the various specialties of surgery. The volume is a credit to the editor and the contributors and should be in the library of every surgeon.

PRACTICAL CHEMICAL ANALYSIS OF THE BLOOD. By Victor Caryl Meyers, M. A., Ph. D. Illustrated.

St. Louis: C. V. Mosby Company, 1921. Price, \$3.00.

This book is intended as a guide to the diagnosis and treatment of disease. Chemical means as an aid to diagnosis has recently taken on a wide scope. This work includes methods of determining blood volume proteins, serum albumin globulin, improved methods of hemoglobin estimation, methods for the determination of the non-protein nitrogen and its individual components. This work will be found of great assistance in the laboratory and others interested in the subject.

THE MEDICAL CLINICS OF NORTH AMERICA. March, 1921. Volume IV, No. V. The New York Number. Published bi-monthly by W. B. Saunders Company, Philadelphia and London. Price per year, \$12.00.

The contributors to this number are Doctors Barr, Bass, Bauman, Blumgarten, Boas, Brooks, Bullowa, Draper, Geylin, Hart, Holland, Cantor, Lamb, Longcope, Marks, McCann, Mosenthal, Ottenberg, Pardee, Rosenthal, Sanger.

THE NEW POCKET MEDICAL FORMULARY WITH AN APPENDIX. By William Edward Fitch, M. D. Third edition.* Revised. Philadelphia: F. A. Davis Company, 1921. Price, \$2.50 net.

This handy little book has gone through three editions, which speaks volumes in its favor. We commend it very highly as a work of reference.

HANDBOOK OF ELECTROTHERAPY FOR PRACTITIONERS AND STUDENTS. By Burton Baker Grover, M. D. Illustrated with 103 engravings in the text and 6 plates of 12 charts. Philadelphia: F. A. Davis Company, 1921. Price, \$4.00 net.

Most physicians employ electricity as a therapeutic agent and owing to the fact that few medical colleges include electrotherapeutics in their curriculum. This work fills a great void. The work is concise, clear and meets the intentions of the author.

PRINCIPLES OF HYGIENE: A Practical Manual for Students, Physicians and Health Officers. By D. H. Bergey, M. D., Dr. P. H., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Seventh edition, thoroughly revised. Octavo of 556 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.50 net.

The fact that this work has gone through seven editions in rapid succession indicates a large and growing demand for it. The work has been compiled with the object in view of meeting the needs of students of medicine, nevertheless it will be found of great value by health officials and physicians interested in hygiene.

A PRIMER FOR DIABETIC PATIENTS. A Brief Outline of the Principles of Diabetic Treatment, Sample Menus, Recipes and Food Tables. By Russell M. Wilder, M. D., May A. Foley and Daisy Ellithorpe, Dictations, The Mayo Clinic. 12 mo. of 76 pages. Phila-

delphia and London: W. B. Saunders Company, 1921. Cloth, \$1.50 net.

This is a work of 76 pages and 9 chapters. It is concise and clearly written and will be found of great aid to physicians treating diabetic patients.

THE PRINCIPLES OF THERAPEUTICS. By Oliver T. Osborne, M. D., Professor of Therapeutics, Department of Medicine, Yale University. Octavo of 881 pages. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$7.00 net.

This work has been written from the viewpoint of presenting the data necessary for advanced students to well understand the object of scientific treatment, a rational use of active drugs and the physical methods used in the treatment of disease. It is also aimed to present even undergraduate subjects tersely and concisely. It contains a good section on prescription writing, a commentary on the valuable drugs and preparations of the United States pharmacopoeia.

THE SURGICAL CLINICS OF NORTH AMERICA. APRIL, 1921, VOLUME I, NUMBER II. NEW YORK NUMBER. PUBLISHED BI-MONTHLY. W. B. SAUNDERS COMPANY. PHILADELPHIA AND LONDON. PRICE PER YEAR \$12.00.

The contributors to this number are Drs. Fred H. Albee, Leo Buerger, John F. Erdmann, Charles L. Gibson, John A. Hartwell, Charles Gordon Hoyt, Kenneth Johnson, Walton Martin, Willy Meyer, Eugene H. Pool, Fordyce Barker St. John, Byron Stookey, Allen O. Whipple.

DISEASES OF CHILDREN. By Herman B. Sheffield, M. D. With 238 illustrations, mostly original, and nine colored plates. St. Louis: C. V. Mosby Company, 1921. Price \$9.00.

This work is designed for the use of students and practitioners of medicine. It represents the author's experience in the field of Pediatrics for nearly thirty years. This work embodies the latest knowledge of the theory and practice of the diseases of infancy and childhood. The work is conveniently divided into fourteen sections, the classification of the diseases varying somewhat from that of older text-books, so as to correspond to the modern conception of the causation of the diseases in question. •

THE TREATMENT OF ACUTE INFECTIOUS DISEASES. BY FRANK SHERMAN MEARA, M. D. SECOND EDITION, REVISED. NEW YORK. THE MACMILLAN COMPANY. 1921.

In this edition the subject of Infectious Diseases is brought up to date. In this work is included the more common infections of the respiratory tract. There has also been added a chapter on acute pleurisy. Two clinical complexes, the one probably incident upon influenza epidemic, the other consequent upon military operations, encephalitis, lethargica and trench fever have been added. Also two less commonly encountered infections have been added, namely, rat bite fever and rocky mountain spotted fever.

Society Proceedings

ILLINOIS STATE MEDICAL SOCIETY MEETING OF HOUSE OF DELEGATES

OFFICIAL MINUTES

SPRINGFIELD, ILLINOIS

May 17 and 18, 1921

The meeting of the House of Delegates of the Illinois State Medical Society was called to order at 8:15 P.M., Tuesday, May 17, 1921, in the Masonic Temple, Springfield, Ill., the president, Dr. William F. Grinstead, Cairo in the chair.

The first order of business was the report of the committee on credentials by Dr. W. H. Gilmore, Mt. Vernon.

It was moved and seconded that the report of the committee on credentials be accepted. Unanimously carried.

The secretary, Dr. W. H. Gilmore, then called the roll and announced that a quorum was present.

The next order of business was the reading of the minutes of the previous meeting. It was moved by Dr. C. B. King and seconded that the minutes as published in the July, 1920, issue of the JOURNAL be accepted in lieu of the reading by the secretary. Unanimously carried.

Dr. W. H. Gilmore then read the secretary's report, which was as follows:

SECRETARY'S REPORT, 1921

Gentlemen of the "House of Delegates": Your Secretary begs to report the collection of the following sums from all sources for the year 1920 and for the first four months of 1921. The first figure read being for the fiscal year and the second for the first four months of this year:

	1920	1921
Adams	\$ 198.00	\$ 255.00
Alexander	73.50	66.00
Bond	36.00	.....
Boone	39.00	42.00
Browne	24.00	.....
Bureau	141.00	90.00
Carroll	79.00	.....
Cass	54.00	.....
Champaign	213.00	168.00
Christian	104.00	108.00
Clark	71.00	39.00
Clay	39.00	36.00
Clinton	48.00	.....
Coles-Cumberland	124.00	99.00
Crawford	83.00	60.00
Cook	10,050.00	5,000.00
DeKalb	108.50	84.00
DeWitt	50.00	36.00

Douglas	90.00	57.00
Edgar	72.00	54.00
Edwards	18.00	18.00
Effingham	75.00	63.00
Fayette	33.00	12.00
Franklin	102.50	5.50
Fulton	18.50	158.00
Gallatin	31.50	18.00
Green	93.00	89.00
Grundy	30.00	3.00
Hamilton	30.00	.....
Hancock	42.00	42.00
Hardin .....	.....	24.00
Henderson	33.00	.....
Henry	135.00	111.00
Iroquois-Ford	167.50	120.00
Jackson	93.00	90.00
Jasper	36.00	39.00
Jefferson	63.00	93.00
Jersey	24.00	21.00
Jo Daviess	56.00	.....
Johnson	30.00	26.50
Kane	291.00	36.00
Kankakee	165.00	102.00
Kendall	3.00	24.00
Knox	134.50	93.00
Lake	104.50	84.00
La Salle	259.50	54.00
Lawrence	36.00	78.00
Lee	108.00	75.00
Livingston	102.50	6.00
Logan	121.50	48.00
Macon	234.00	210.00
Macoupin	152.50	52.50
Madison	288.00	285.00
Marion	111.00	.....
Marshall-Putnam	33.00	.....
Massac	42.00	42.00
Mason	54.00	48.00
McDonough	103.00	60.00
McLean	289.50	174.00
McHenry	108.00	90.00
Menard	41.50	.....
Mercer	58.50	51.50
Monroe	48.00	36.00
Montgomery	96.00	.....
Morgan	143.50	100.00
Moultrie	42.00	27.00
Ogle	75.00	6.00
Peoria	396.50	273.00
Perry	50.50	51.00
Piatt	53.50	46.50
Pike	119.50	84.00
Pope .....	.....	.....
Pulaski	21.00	6.00
Randolph	54.00	81.00
Richland	30.00	.....
Rock Island	209.50	197.00
Saline .....	.....	72.00
Sangamon	399.00	.....
Schuyler	18.00	21.00
Scott	30.00	9.00
Shelby	39.00	62.50
Stark	31.50	3.00
St. Clair	345.00	.....
Stephenson	157.50	132.00
Tazewell	36.00	63.00
Union	63.00	60.00
Vermillion	228.00	263.00
Wabash	8.00	39.00
Warren	152.50	.....
Washington	48.00	54.00
Wayne	55.50	42.00
White	54.00	57.00
Whiteside	97.50	81.00
Will	147.00	123.00

Williamson	114.00	87.00
Winnebago	276.00	213.00
Woodford	51.00	63.00
Subscription	126.25	57.25
Exhibits	1,000.00	350.00
Refunds	396.90	2.75
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	\$20,864.15	\$11,472.00

For the year 1920, 195 voucher checks were drawn for \$39,974.82 divided as follows: Medico-Legal, \$7,481.47; Legislative, \$1,174.66; General Fund, \$31,318.69. For the first four months of 1921, 45 Voucher checks were drawn for a total of \$9,263.90; Medico-Legal, \$687.94; Legislative, \$314.81; General Fund, \$8,261.15.

During the past year 708 members have been dropped; 64 have died; 593 members have been accepted by the various component societies and 337 have been reinstated. The total membership of the Society is 6,618.

Respectfully submitted,

W. H. GILMORE,
Secretary.

It was moved and seconded that the report be accepted and placed on file. Unanimously carried.

Dr. C. E. Crawford, Rockford, presented the report of the chairman of the council. The report was as follows:

COUNCIL REPORT

To the President of the House of Delegates, Members of the Illinois State Medical Society—Ladies and Gentlemen:

As the chairman of the Council, I beg to submit annual report on the activities of the Council for the past year.

The Council was organized immediately after the adjournment of the House of Delegates at Rockford last May and Dr. C. E. Crawford was elected chairman.

The regular meetings were held at Chicago, June 10, 1920; October 18, 1920, and April 15, 1921. A special meeting was held in Chicago on December 15, 1920.

Drs. C. S. Nelson, H. P. Beirne and S. J. McNeill were appointed members of the finance committee:

Drs. J. S. Nagel, T. W. Gillespie, C. E. Price, C. W. Lillie and C. F. Burkhardt were appointed members of the council advisory legislative committee. J. W. VanDerslice was added to this committee later.

Drs. C. J. Whalen, C. W. Lillie, Charles F. Burkhardt, C. E. Price and W. F. Grinstead were elected members of the publication committee. Dr. Charles J. Whalen was re-elected editor and Dr. H. G. Ohls as managing editor.

At a meeting in Chicago June 10th, the office of Dr. C. D. Pence, councilor of the third district, was declared vacant and Dr. J. W. VanDerslice was elected to fill unexpired term or until the meeting of the House of Delegates.

At the June meeting, plans for a more efficient organization regarding the handling of anticipated legis-

lative matters was discussed and action was taken at that time to perfect such an organization. The councilor of each district was requested to call a meeting of all the physicians in his district regarding plans for anticipated organization. This was done in most instances, and at the October meeting the plans were adopted and referred to the legislative committee with a request that they make a recommendation to a special meeting on December 15. At this meeting, the legislative committee presented the following recommendations carrying out schemes of organization presented to the Council by Dr. C. E. Humiston at the October meeting:

1. That Dr. J. R. Neal, chairman, of Springfield be the point of origin of the organization.
2. That Dr. Neal be instructed to employ such office assistance as was necessary.
3. That a floor manager be employed during the next legislative session if necessary.

These recommendations were adopted.

The legislative committee of the council was directed to assume full charge of all legislative matters in cooperation with Dr. Neal.

LEGISLATIVE

Never in the history of the society has more work been required to prevent vicious and obnoxious measures from being presented or enacted by the General Assembly. Dr. Neal and the Legislative Committee have been required to be constantly alert during the present session and have been able to handle the following obnoxious bills satisfactory to the General Welfare:

Senate Bill No. 1. Exempts Optometrists from Jury Service.

Senate Bill No. 10. Maternity.

Senate Bill No. 134. Maternity.

Senate Bill No. 223. Maternity.

House Bill No. 162. Quarantine of Venereal Diseases.

House Bill No. 194. Dental, prevents physicians and surgeons from treating or operating on jaw or alveolar process.

House Bill No. 217. Cosmetic Therapy.

House Bill No. 236. Chiropody.

House Bill No. 243. Allowing foreign physicians to register without examination.

House Bill No. 283. Making it the duty of the County Court—instead of the Director of Registration—to revoke licenses.

House Bill No. 373. Osteopathy.

All of the above bills received unfavorable consideration in the committees.

Senate Bill No. 77. Mechanotherapy, received favorable consideration in the Committee and is on the *third* reading in the Senate.

Senate Bill No. 187. County Health Officer Bill, in Committee.

Senate Bill No. 359. Chiropractic, received favorable consideration in the Senate and is now on the *second* reading.

Senate Bill No. 417. Maternity, in committee.

House Bill No. 563. Mechanotherapy, received favorable consideration in the Committee and is on the third reading in the House.

House Bill No. 716. Osteopathy Bill, in Committee at the present time with no action.

Most all of these bills, if passed, would allow the different cults the rights to practice medicine without any preparation and in violation of the Medical Practice Act.

The Maternity Bills introduced tend toward State Medicine.

Senate Bill No. 294, County Health Commissioner Bill, passed the Senate and is in the Committee of the House. Senate Bill No. 362 received favorable consideration from the Senate Committee. Senate Bill No. 363 is in Committee of the Senate. These three bills were indorsed by the Council.

It is gratifying to state that the Director of Public Health and the Director of Registration and Education are in accord with the medical profession and are rendering much assistance in combating vicious legislation introduced during the present General Assembly.

C. E. CRAWFORD.

It was moved and seconded that the report be accepted. Unanimously carried.

Dr. A. J. Markley, Belvidere, presented the treasurer's report, as follows:

TREASURER'S REPORT

Belvidere, Ill., May 13, 1921.

Report of Illinois State Medical Society for period May 19, 1920, to May 13, 1921.

GENERAL FUND

May 19, 1920—

Balance on hand.....	\$13,519.50
Received from Secretary.....	8,602.65
Received from ILLINOIS MEDICAL JOURNAL.....	15,000.00

Total	\$37,122.15
Vouchers cashed	28,785.45

May 13, 1921—

Balance on hand	\$ 8,336.70
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MEDICO LEGAL DEFENSE FUND

May 19, 1920—

Balance on hand.....	\$16,407.67
Received from Secretary.....	4,684.25

Total	\$21,091.92
Vouchers cashed	4,635.26

May 13, 1921—

Balance on hand.....	\$16,456.66
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LEGISLATIVE FUND

May 19, 1920—

Balance on hand.....	\$ 3,523.63
Received from Secretary.....	2,337.50

Total	\$ 5,861.13
Vouchers cashed	1,007.42

May 13, 1921—

Balance on hand	\$ 4,853.71
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The accounts for the fiscal year May 16, 1919, to May 15, 1920, have been audited by a public accountant and auditor, and are submitted as a part of this year's report of the Council. An itemized

statement of all expenditures is attached hereto, also statement of balances of the various funds, and the gross balance on hand May 15, 1920.

GENERAL FUND

Balance May 16, 1919.....	\$ 9,423.48
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Receipts—

W. H. Gilmore.....	\$11,655.29	
ILLINOIS MEDICAL JOURNAL.....	12,328.73	23,984.02

\$33,407.50

General Expense—

Miscellaneous traveling expense	\$ 391.45
Stenographic work	72.60
Postage	28.75
Miscellaneous office expense.....	385.48
Luncheon expense	110.25
Master Reporting Company..	225.00
Treasurer's miscellaneous expense	11.00
Salaries	1 200.00
Legislation expense	300.00
Miscellaneous convention expense	147.03
Traveling expense—Re-Council meetings	717.73
Premiums on bonds.....	35.00
Printing and stationery.....	354.20
Moving picture expense.....	31.29
Honorarium, King-Markley..	300.00
	4,309.78

Journal Expense—

Publishing expense	\$10,187.00
Stenographic work	747.77
Clippings	42.00
Subscriptions	17.28
Postage	684.50
Miscellaneous general expense	1.94
Repairs—typewriters	7.75
Office supplies	210.33
Salaries and labor.....	2,580.15
Miscellaneous office expense.....	182.67
Printing and stationery.....	197.33
Office equipment	19.50
Honorarium, Whalen-Ohls ..	700.00
	15,578.22
	19,888.00

Balance May 15, 1920.....	\$13,519.50
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MEDICO LEGAL DEFENSE FUND

Balance May 16, 1919.....	\$14,502.16
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Receipts—

W. H. Gilmore.....	6,992.75	
		\$21,494.91

Disbursements—

Legal services	\$4,043.12
Retainer—R. J. Folonie, 1920.....	1,000.00
Traveling expense	44.12
	5,087.24

Balance May 15, 1920.....	\$16,407.67
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LEGISLATION FUND

Balance May 16, 1919.....	\$ 1,934.41
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Receipts—

W. H. Gilmore.....	3,355.50	
		\$ 5,289.91

Disbursements—

Legal expense	\$ 250.00
Robinson Advertising Agency.....	169.93
Postage, telephone and telegraph.....	183.13
Printing and stationery	245.70
Salaries of Secretary and clerks.....	413.00
Stenographer service	62.50
Traveling expense	442.02
	1,766.28

Balance May 16, 1920.....	\$ 3,523.63
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RECAPITULATION

General fund	\$13,519.50
Medico Legal Defense fund.....	16,407.67
Legislation fund	3,523.63
Total	<u>\$33,450.80</u>

It was moved and seconded that the report be accepted and placed on file. Unanimously carried.

The next order of business was the report of the councilors from the different districts.

Dr. C. E. Crawford, Rockford, councilor of the First District, reported as follows:

I have not prepared a written report for the First District; I only desire to say that the physicians in this district are in perfect accord with the organization and are working in a harmonious manner. They are organizing in a more efficient way to handle the legislative matters. We called a meeting of the First District and every man in the district was in favor of a more efficient organization to handle legislative matters.

Dr. E. E. Perisho, Streator, reported for the Second District as follows:

Ten different counties are represented in the Second District and we have seven of these in good working order, well organized and holding two meetings a year. A few of the larger counties have subdivisions. The two counties not in good working order are Marshall and Putnam. They have been on the ragged edge for years because of mud roads, small towns, and only two or three men in each town, with no place to meet. I have made a personal visit to every physician in the two counties, trying to persuade them to keep up their organization in a better way. I was unable to find a single man in the two counties who wanted to keep up the organization. Their plea is that they are so situated with mud roads, small towns, and no place to meet. Some of them find it easier to take the train to Peoria and attend meetings there, and the men to the south and east can go to the towns near them which are accessible by train. We have given some of these men the privilege of joining the other county societies.

In regard to the medical legislation work, we have a live wire in each county. The men in each county are working hard, writing letters and getting in touch with our senators and representatives, and I believe we can say that we have all our representatives and senators giving us due consideration and working for our interests.

Dr. S. J. McNeill, Chicago, reported for the Third District as follows:

THIRD DISTRICT

Springfield, Ill., May 17, 1921.

The Chicago Medical Society has a membership in good standing of 3,575 members, which includes Cook County. Has 15 branch societies. The membership of each branch is as follows:

North Side Branch368

North Shore	526
Evanston	150
Northwest	343
West Side	394
Aux Plaines	247
Douglas Park	223
Stock Yards	126
Englewood	197
South Side	379
South Chicago	50
Irving Park	129
Calumet	99
Chicago Heights	38
Jackson Park	366

Total 3,575 to April 1st.

The central society meets every Wednesday night. During this year 127 scientific papers have been read, discussed by 530 members. The branch societies meet once a month and are well attended. Three to five scientific papers are read and very thoroughly discussed.

The council of the Chicago Medical Society is made up from the councilors of the branch societies and also councilors at large, meets once a month, and takes up the business of the Chicago Medical Society.

The number of councilors is 56.

There were over 50 deaths in the Chicago Medical Society this year, some of the most prominent physicians of Chicago. A few were dropped for non-payment of dues and have taken in about 400 new members, which shows our society is increasing in membership rapidly.

S. J. McNIELL.

Dr. J. S. Nagel, Chicago, also reported for the Third District as follows:

I do not know, Mr. Chairman, that in the House of Delegates I have anything special to say to you. The Secretary has given you a report of the workings of the Chicago Medical Society. The past year has been a very busy one from my standpoint, as the President-elect is Chairman of the Council, which is the executive body of the Chicago Medical Society and is composed of something like 55 or 57 councilors. If you do not know anything about the organization, I might say that we have 15 councilors-at-large, five of whom are elected every year and serve for a term of three years. Each one of the branch societies is entitled to a certain number of councilors, depending on the number of members in the branch, so that in all we have 55 or 57 councilors. This Council meets monthly to transact the business of the Chicago Medical Society.

This year has been a busy one in many respects. The Society has transacted a great deal of business. I feel we have done some rather constructive work. We have had some very nasty angles to deal with, and at times it has placed the Council in some trying positions. We have fought the thing through to the best of our ability, and whether or not we have erred in some of our transactions, we have done our best.

I do not know whether it would interest the House of Delegates to hear of some of the local affairs. We have in our city an organization known as the Public Health Institute. This has been one of the hardest things we have had to fight in the last year. I mention this particularly because some of you may be reading the Chicago newspapers and have seen the advertisements of this institute, and it may have occurred to you to wonder what the Chicago Medical Society is doing about it. We have done all we possibly could, because there is no way of attacking this institute in a legal manner. We have caused a bill to be introduced into the House of Representatives prohibiting laymen from organizing a corporation to practice medicine and hiring doctors to work for them, and then advertising to get work for these doctors. If you read the newspapers you know what they advertise. Suffice it to say that the legal fraternity have such a law on the statute books, that no corporation, even though they are lawyers, can incorporate themselves to practice law and then hire lawyers to practice for them. We had a hearing a week ago tomorrow, and Dr. Humiston and myself appeared before the committee here in Springfield. A very noted lawyer from Chicago, who happens to be on the board of directors of the Public Health Institute, appeared also. When he got all through with his address he found it rather embarrassing and a little difficult to explain satisfactorily to the committee why he was advocating something that his own legal fraternity did not tolerate, namely, that no corporation can incorporate to practice law and then hire lawyers to practice for them. All we asked was that he grant us the same privileges that were granted to the lawyers, that no corporation could organize to practice medicine and then hire doctors to practice for it.

Dr. T. W. Gillespie, Peoria, reported for the Fourth District as follows:

I have a rather short report to make. My district comprises twelve counties, all well organized and having meetings at least twice a year. We have had two district meetings, one at Monmouth in the fall, which was entirely a business meeting with no scientific program. We had 128 doctors present. In April we had another meeting in Peoria. This was more or less open to the public. We followed Dr. O'Reilly's policy and took the stuff to the people. We had over three or four hundred people to listen to these doctors. In Warren, Knox, Peoria and Rock Island there are organizations of doctors, dentists and druggists. These organizations are very effective and decidedly enthusiastic, especially in Peoria, Warren and Rock Island. I am not so sure about Galesburg. I have attended meetings in probably six or seven of the counties during the year. It is almost impossible for a councilor to get to all the meetings, because many times there are two or three meetings on the same day in different counties. I am sure things in the Fourth District are in good shape. We have good live men in each county and get response. In these district meetings and in some of the meetings with the den-

tists and druggists we had the legislators present—in Peoria we had four and in Rock Island three. They were very enthusiastic about the meetings. Our members of the Senate and House of Representatives are doing very good work.

Dr. C. S. Nelson, Springfield, gave the report for the Fifth District as follows:

FIFTH DISTRICT

Springfield, Ill., May 17, 1921.

Mr. President and Gentlemen of the House of Delegates:

From all available information, the report of your councilor from the 5th District, will not vary greatly from that of last year.

There is but a very small per cent of the eligible physicians living in the 5th District who are not members of one of the component societies, but to my mind, simply being a member does not discharge the full responsibility. Apparently, however, some members seem to think differently, and aside from paying their dues, show a very apathetic feeling toward the organization. On this account, I have had a little difficulty in keeping intact one or two of my county organizations. It is true the membership in these counties are widely scattered and transportation facilities oftentimes very inconvenient, but these facts should not deter them from the duties they owe to the medical organization. They should hold their county organizations intact by all means, and meet with them as often as possible. I trust the delegates from the 5th District especially, will learn many things at this meeting, legislative as well as scientific, the knowledge of which, when conveyed to your county societies, will spur them into action.

The present legislature seems to have been particularly prolific in the matter of bills introduced, that are inimical to the medical profession, and your councilor has devoted no little time in an effort to assist our efficient chairman of the legislative committee, in combating these bills. This time and work has been cheerfully given, but it is often discouraging to see the apathy that exists among some of the members of some of the county societies, oftentimes to such an extent, that important communications remain unanswered. Will the delegates kindly carry these matters back to their county societies, and see if more interest can not be aroused, which will have the effect of making the work of the councilors and legislative committee less burdensome and more effective.

Your councilor has attended all the meetings of the council during the past year, and endeavored to work for the best interest of the Illinois State Medical Society, conserving economy wherever possible, a full report of which will be given by the chairman of the council, the treasurer and the editor of the JOURNAL.

Respectfully submitted,
C. S. NELSON,
Councilor, 5th District.

Dr. H. P. Beirne, Quincy, gave the report for the Sixth District as follows:

SIXTH DISTRICT

Springfield, Ill., May 17, 1921.

To the House of Delegates, Illinois State Medical Society:

The Sixth Councilor District comprises the counties of Morgan, Scott, Brown, Pike, Adams, Macoupin, Calhoun, Greene and Madison. Societies visited 6. The medical profession is organized in each of the counties named and regular meetings are held in all of the component societies save one, Calhoun. The members of the respective societies have co-operated heartily with their councilor when called upon to further the interests of the medical men, to kill vicious legislation and protect the general welfare of the medical profession.

The physicians in my district fully realize that they must be alive to the situation to safeguard the profession against health insurance, state medicine and other infringements upon their rights, and will contribute financially, or in any other way, to the limit, to further a more thorough organization of the profession to protect their members from the fads, the abuses, the pathies and others who would lower the standard of medical efficiency.

H. P. BEIRNE,
Councilor Sixth District.

Dr. C. F. Burkhardt, Effingham, of the Seventh District was not present to give the report for this district, as he was attending the banquet of the eye, ear, nose and throat section.

Dr. C. W. Lillie, East St. Louis, reported for the Ninth District as follows:

NINTH DISTRICT

To The House of Delegates:

In the Ninth District there is a prevailing professional apathy which has manifested itself in falling off in membership in several of the counties.

There are in every county society, as in other organizations a few "drones," non-workers, and it is such as these who only pay dues when threatened with mal-practice suits, or when some other dire calamity threatens to overtake them. It is such as these who prevent the medical profession exerting its full influence in legislative matters. They may be likened to the weak churchman who must be "saved" at each annual revival.

There has been an unusual amount of correspondence during the past year. The selection and appointment of county committeemen, and the distribution of information relative to legislative matters, has taken a fair share of attention. On several of the pending bills members of the House and Senate, have been interviewed. On others appeals

have been made to their wives, and to club women and others whose influence might prove useful.

In this I believe some good has been accomplished.

After an experience of several years as Councilor, and as my term of office expires with this session, I believe I can recommend, as a measure which I am confident would prove of value to the State Society, that a per diem compensation be given the Councilors, and that they be required to render such service as the needs of the Society may demand.

Respectfully submitted,

C. W. LILLIE,
Councilor 9th District.

May 16, 1921.

It was moved and seconded that the reports of the councilors be accepted. Unanimously carried.

Dr. Charles J. Whalen, Chicago, gave the report of the editor. The report was as follows:

REPORT OF THE EDITOR OF THE ILLINOIS MEDICAL JOURNAL

Considering the distorted conditions of the country during the past year, the financial depression starting in June, or one month after our meeting in Peoria one year ago and culminating in a complete monetary collapse in November, it is a satisfaction to the editor to be able to report that the various activities of the JOURNAL have progressed steadily in spite of the awful handicap under which we had to labor.

A detailed statement shows that five issues of the JOURNAL contained 128 pages and that seven issues contained 160 pages. Expressing it in terms a little different, yet meaning the same thing, we published 37,400 128 page JOURNALS and 57,450 160 page JOURNALS, a total of 91,850 JOURNALS printed from June, 1920, to May, 1921, inclusive. This represents an increase of 3,450 copies over the previous year and shows an average monthly output of 7,650 copies.

The 3,450 extra copies together with the increase in size of the JOURNAL from 128 to 160 pages represents approximately 3,000,000 more pages of reading matter printed than during the previous year. This is a remarkable showing considering the staggering increase in cost of paper, labor and taken in connection with the general financial upset condition of the country and of business affairs generally.

In connection with the increase of the size of the JOURNAL to 160 pages, the editor calls attention to the fact that this is a record size for State Medical Journals. No other similar State publication approaches this in size. Its nearest competitor containing 100 pages. From this it will be readily seen that the ILLINOIS MEDICAL JOURNAL is 60 pages larger than its nearest competitor. Only two weekly or monthly Medical Journals in America are larger than the ILLINOIS MEDICAL JOURNAL—both of these are national and we might say international in character.

The JOURNAL has become a popular medium for the

publication of medical data. Many of the greatest medical men in the United States have solicited the JOURNAL as a medium of publication for scientific papers. Requests for space for publication of papers in the JOURNAL have become so great that the editor finds it impossible to accommodate more than a major percentage of solicitors.

ADVERTISING

In the editor's report one year ago he called attention to the remarkable increase in the number of firms that joined the advertising columns the previous year representing as it did 109 per cent increase in new contracts represented \$11,000, an increase of 21 per cent in money. As a result of the previous years' experience the editor had rosy expectations of continued increase in new advertising patronage and had likewise great confidence in old advertisers' continued patronage in the JOURNAL. Our rosy expectations were rudely blasted by the financial panic early in the year. Immediately after our last annual meeting a money stringency set in which increased rapidly until November when it was practically impossible to secure advertising. Scores of old patrons attempted to cancel existing contracts. Indeed, many of them actually withdrew for our advertising columns and this in spite of the most strenuous efforts on the part of six trained solicitors with the assistance of the editor.

Because of the financial stringency many of our formerly prompt paying patrons have been unable to pay for space actually used, indeed many of them are several months in arrears. In spite of this handicap we have collected to date \$19,333.19 exclusive of subscriptions which amount to several hundred more. We have on our books upwards of \$2,500 of good accounts but they are still unpaid. In spite of the great financial depression through which we have passed many new contracts have been written and on the whole our advertising department has every reason to be proud of the record made. We are exactly today where we were one year ago, namely, with \$21,000 of contracts in force, a remarkable showing, everything considered. As shown in the last annual report the phenomenal amount of new advertising secured the latter part of the previous year the expense of which had to be paid from this year's income together with the work done by our solicitors this year has naturally increased the expense of the JOURNAL materially. However, both the gross and net income from the JOURNAL is far above what it was one year ago.

COMPLAINTS

The usual number of complaints for failure to receive the JOURNAL were received during the year. In practically every instance the fault was due to the inefficiency of the postal department because of shortage of competent help. The editor desires to call attention to the fact that the failure in delivery of the JOURNAL to every member each month is in no way the fault of the editor's office. We make every effort to keep the mailing list accurate, the list is carefully revised each month and every possible effort is made

in order to guarantee that a copy of the JOURNAL reaches every member each month.

INCREASED EXPENSES

In spite of the financial depression and the generally upset condition of the country that existed throughout the year, together with the general disposition towards the lowering of the cost of living the cost of getting out the JOURNAL has continued to increase. Print paper has remained scarce and continued to advance in price. The cost of labor has been and is still high. For these reasons the expense of getting out the JOURNAL has not materially decreased and this in spite of the fact that the general cost of commodities and living conditions are materially lower than they were one year ago.

The total amount received for advertising space in the JOURNAL this year is—

Cash collected	\$19,333.19
In good accounts due and unpaid.....	2,500.00

Total	\$21,833.19
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The total amount received for advertising last year was \$14,391.26.

It was moved and seconded that the report be accepted. Carried.

The next order of business was the report of the standing committees, the first being the committee on medical legislation. Dr. John R. Neal, Springfield, chairman, reported as follows:

REPORT OF THE LEGISLATIVE COMMITTEE

In presenting this preliminary review of the legislative situation I feel that it is opportune in view of the fact that we are in the thick of the fight at the present time as the Legislature will not adjourn until about June 20.

The usual assortment of vicious bills from the medical viewpoint have been presented—and fortunately, it is safe to say, that their progress is under our control, but it is evident the opposition or the proponents of these measures are not going to be so easily defeated.

The Osteopaths have had two bills before the lawmakers this year: One was defeated before the efficiency and economy committee, they then put in a much more vicious measure before another committee, which they thought was favorable to them, but which has a safe majority at the present time against the bill.

The Chiropractors were able to have their measure reported out on the floor of the Senate favorably, not because of any lack of opposition on our part, but merely because the chairman of that committee was the father of the bill and naturally he could send it out at a favorable time. It is an amusing fact that out of the fifteen Chiropractors that appeared before the committee all except two who were practicing in Illinois were doing so in violation of the law.

The Mechanotherapy Bill is on third reading in both Houses, but is doomed for defeat for the poll of both Houses gives us a safe majority.

This bill sailed smoothly along practically unopposed, for it was drafted by a very able attorney in Chicago, who has been constantly in Springfield lobbying for the bill, and he did not attempt to oppose the physician, but showed to the entire satisfaction of the committees in the House and Senate the needful addition to the Medical Practice Act as contained in his bill. The Senate and House have since been informed that it is not only unnecessary, but a most unwise bit of legislation. This attorney is now canvassing the councillors of your Society in an effort to amend the bill, making it acceptable to us, and the only amendment we could suggest was to strike out the *Enacting Clause*.

There are also other bills we are forced to oppose such as the Cosmeticians, the Maternity Measures, etc. The Faith Healers are yet to be heard from although they have a bill ready to introduce under the caption of "*Suggestive Therapeutics*."

The situation in Illinois is more commendable than in many other States, but unless the medical profession organize on a more secure basis than they are at the present time we will ultimately lose our battle. The same Chiropractic measure that we are fighting was introduced in several States recently and has become a law. They are organizing on a nation-wide plan and have announced that they will break the present high requirement of our Medical Practice Act. Will they succeed? That depends on your political activity now and in the future and not on your mere wish or assertion that they cannot.

Missouri physicians awakened too late to find House Bill 288 a law, signed by a Governor who believes that the treatment of a sick child can safely be administered by a graduate of a "Legally" Chartered Medical School instead of a "Reputable" Medical College, which was the former law. Exit "Science" enter "Diploma" mills. Can that happen to Illinois? "Yes," if you do nothing to oppose it.

A letter from Dr. C. V. Chapin, Superintendent of Health of Rhode Island, says: "The Osteopaths are already licensed in the State and I fear that the Chiropractor Bill will be passed soon, as they have been working on the politicians for two years with large funds for that purpose."

A letter from Dr. Edward Quick of Milwaukee, Wis., in part says: "We have about reached the point in Wisconsin where we are going to let the public have all the *quacks* they want."

Michigan narrowly escaped a catastrophe with her Chiropractic Bill and it was only by a herculean effort that she saved the day by having over two thousand telegrams, representing fifty per cent. of all the doctors of that State, poured in on the legislators at a propitious moment.

Oklahoma Chiropractors are jubilant—they have just passed their bill creating a separate board of examiners.

New Jersey physicians lost their fight in several health measures.

Many letters from other States are on file and the

situation is acute and a growing tendency to lower educational requirements to practice medicine is evident.

I am quoting from the *Illinois State Journal* of Springfield, of May 13, 1921, relative to the recent Osteopathic meeting, in which St. John's Hospital denied them use of their hospital for clinics during the State meet. Here's what the osteopathic news reporter says:

"The trouble centers in what is called professional jealousy. The education of the D. O. and the M. D. is practically identical and absolutely so in the subject of surgery. Surgery is the same the world over and although the Osteopathic surgeons may be able to cure conditions, which the M. D. would operate for, the fundamental education is the same. The monopolistic tendencies of the M. D. to not allow any one other than those, who have the same degree to invade the field of surgery is becoming more apparent every day. The so-called standardization of hospitals is nothing more nor less than an underhanded method of ruling out osteopathic physicians and surgeons from hospitals, and also those of their own degree who have not joined their associations.

"Jealousy, at best, is a most deplorable condition, but when it interferes with service being given to aid suffering humanity, it then assumes another form. It is to be regretted that any one set of doctors should strive by means, both fair and foul, to keep others from doing good when the fundamental educational requirements of a four year high school education and a four year college course have been complied with, and the same subjects studied in the same manner. It is to be hoped that before long a new law may clarify the air as to who shall practice and operate in the hospitals of this state."

OSTEOPATHS ANGERED, RAP MEDICAL BODY

Springfield, Ill., May 13.—Protesting action of the Sangamon County Medical Association, which yesterday forbid the Illinois Osteopathic Association to hold its convention clinics at St. John's Hospital, Dr. Hugh Thomas Wise of Rockford, president of the osteopaths, in his annual convention address today denounced the medical association's action as "a shame and disgrace to this great commonwealth," and continued:

"Osteopathy has won its enviable position in the field of therapeutics on sheer force of merit alone.

"Who own the public hospitals? Is it the doctors or the people? You and Mr. and Mrs. Taxpayers are the owners. You have a right to say what form of treatment shall be administered. You are responsible for the care of your body as well as your soul."

Washington, May 13.—Charges that the Public Health Service was issuing propaganda favoring the allopathic school of medicine was made today before the Senate and House education committees considering the Kenyon Public Welfare Department bill.

The real reason of the controversy between the Sangamon County Medical Society and the Osteopaths relative to the hospital fight is that the most prominent Osteopath in Springfield, actively identified in legislative matters, has been prescribing medicine in that institution, and the secretary of the Sangamon County Society, Senator Jno. A. Wheeler, has not only the number and copy of the prescription on the hospital file, but the medicine itself as evidence. Can any respectable hospital endorse such an open violation of the law?

Recently Mr. G. S. Galloway, the resident manager of the Hooper-Holmes Bureau of Chicago, took some Osteopaths to several of his legislature friends in Springfield and in a way endorsed their bill, thinking they were the unfortunate oppressed victims of the physicians' trust, merely to get them a hearing

—as he supposed, and when your chairman heard of the incident he invited Mr. Galloway to his office and gave him one of the Osteopathic Bills and a digest of it and asked for his opinion and he received the following reply by mail:

April 26, 1921—GMDG.

Dr. John R. Neal, Medical Director,
Mutual Life of Illinois,
Springfield, Ill.

Dear Doctor:

After leaving your office the other day I read carefully the draft of the osteopath bill that you gave me and, as a result, I am obliged to agree with you that the bill seeks privileges for the Osteopaths that they, according to their own admission, are not qualified for.

Yours very truly,
G. S. GALLOWAY.

There is no disposition on the part of the Illinois State Medical Society to dictate or to curtail any method of treatment, but it is right and proper that minimum educational requirements be met before anyone may receive a license to treat human ailments. This is a fight so poorly understood by a great many opponents of the medical profession, they believing, or at least would have you believe, that the doctors are selfish and want everyone to practice their way, which is far from the facts, as the paramount object of the present Medical Practice Act is to set and maintain a fair standard which all practitioners must meet before licensed.

Now, gentlemen, what's the answer? Are we to let these "Single Thinkers," namely the Osteopaths, Chiropractors, Mechanotherapists, Cosmeticians, etc., go on and on poisoning the minds of our legislative bodies and the public press willingly giving over to them their columns to inculcate into the minds of a sympathetic public that they are being held down by a merciless Medical Trust? Are we to sit idly by and deny it in our meetings and medical journals? Why in our medical journals? The public don't read them—the legislator is not a subscriber—the libraries do not have copies in their reading rooms! We know it's wrong, but if you were accused of "murder" your silence would not make you guilty, but it would certainly help to convict you.

The situation, I believe, needs more than your simple word of disapproval. I merely give you the problem without recommendation as to how it should be met.

It was moved and seconded that the report be accepted. Carried.

Dr. H. N. Rafferty, Robinson, chairman of committee on public policy, was not present to make a report.

Dr. C. B. King, Chicago, chairman of the medico-legal committee, reported as follows:

REPORT OF MEDICO-LEGAL COMMITTEE

Chicago, Ill., May 3, 1921.

Reports of cases and claims during year May 1, 1920, to May 1, 1921.

New Suits Since May 1, 1920

Superior Court of Cook County.....	11
Circuit Court of Cook County.....	14
Municipal Court of Chicago.....	5
Circuit Court of Ford County.....	1
Circuit Court of DeKalb County.....	1
Circuit Court of Franklin County.....	1
Circuit Court of Macoupin County.....	1
Circuit Court of LaSalle County.....	2
Circuit Court of Will County.....	1
City Court of East St. Louis.....	2
Justice Court of Benld, Macoupin County.....	1
County Court of Will County.....	1

Total New Suits Filed Since May 1, 1920... 41

Suits Disposed of Since May 1, 1920

United States District Court.....	2
Superior Court of Cook County.....	5
Circuit Court of Cook County.....	8
Circuit Court of Peoria County.....	1
Circuit Court of Vermilion County.....	1
Circuit Court of Christian County.....	1
Circuit Court of Ford County.....	1
Circuit Court of Bureau County.....	1
Circuit Court of Franklin County.....	2
Circuit Court of Montgomery County.....	1
Circuit Court of Will County.....	2
Circuit Court of Madison County.....	1
Circuit Court of St. Clair County.....	1
County Court of Will County.....	1
Justice Court of Macoupin County.....	1
Municipal Court of Chicago.....	7

Total Suits Disposed of Since May 1, 1920... 36

New Claims Since May 1, 1920

Claims in Cook County.....	44
Claims in other Counties.....	23

Total67

Report of Cases

Suits pending May 1, 1920.....	61
Suits filed since May 1, 1920.....	41

Total102
Suits disposed of since May 1, 1920..... 36

Suits remaining	66
Claims filed since May 1, 1920.....	67

Supplement to Dr. C. B. King's Report

I was called early last Saturday morning by a Polish doctor who said he had a summons to appear in court in a malpractice suit. I asked when he has to return the summons and he said right away. I said, "When did you get the summons?" and he said, "just

now." The deputy sheriff was there and I talked to him over the telephone. He said it was a writ of *ne exeat*, which means "come with me." Fortunately for this doctor the deputy sheriff was a pretty decent sort of fellow and he took him to the sheriff's office instead of to the jail on the north side. I telephoned Mr. Volini and he went to the sheriff's office and we had this writ quashed before noon on Saturday. The reason given to Mr. Volini for serving such a writ was that the doctor was going to leave the country. It was true he was planning a visit to Poland this summer, but only for a few weeks. That shows what an advantage it is to have a good, live attorney.

It was moved and seconded that the report be accepted. Carried.

Dr. J. V. Fowler, Chicago, chairman of committee on medical education and hospitals, reported as follows:

REPORT OF COMMITTEE ON EDUCATION AND HOSPITAL

The organization of the Committee on Medical Education and Hospitals of the Illinois State Medical Society was effected June 25, 1920. The attention of the committee has been directed entirely to the subject of standardization and classification of the hospitals of Illinois for the fifth, or interne year. Before any definite action was taken, the committee endeavored to consult with everyone interested in the question. We met with the officers of the Illinois Hospital Association, the hospital committees of the medical colleges of the State, the Director of Education and Registration of Illinois, the officers of the State and the Chicago Medical Societies, and finally, a general conference was held to which all the above were invited together with the councillors of the State Medical Society, councillors of the Chicago Medical Society, and representatives of all the hospitals of Illinois.

At this conference, the following was agreed to:

Regulations for determining the eligibility of hospitals in the State of Illinois for the reception and training of Internes during the fifth (interne) year of medical instruction:

1. Hospitals must be of at least twenty-five beds capacity with a daily average of at least twenty patients. Each interne shall spend the entire year of service either—
 - (a) In one hospital in which there must be a minimum daily average of five surgical cases, or
 - (b) Shall divide his service between two or more hospitals in such manner as to secure adequate practical experience with medical, surgical and obstetrical patients.
2. Hospitals must have an organized staff which is to be held responsible for the general character of the professional work of the hospital.

3. Hospitals must require a history of the cases treated and a complete hospital record must be kept.
4. Hospitals must be equipped for all routine clinical, microscopical, pathological and bacteriological work, with a staff member in charge. Internes are to be instructed in and have practical laboratory work.
5. Hospitals must have at their disposal a complete x-ray department with a qualified person in charge under supervision of the staff. Internes are to receive instruction in details of the work.
6. Hospitals must provide instruction in anesthesia for internes under expert supervision.
7. Hospitals receiving obstetrical cases must provide instruction for internes under expert supervision in the delivery of normal and the more common abnormal cases.
8. Hospitals are to provide rules setting forth the duties and privileges of internes. The same must be posted and each interne provided with a copy.

Subsequent to this, a questionnaire covering these rules was formulated by the committee, and copies were printed.

Inspectors for the hospitals of the State were then appointed as follows: For the hospitals in Cook County, the councillors of the Chicago Medical Society were appointed, and each councillor was assigned one or more hospitals for inspection. Outside of Cook County, each councillor of the State Medical Society was appointed to inspect the hospitals in his district.

The following hospitals have been inspected, the questionnaires filled out and returned to the committee:

Chicago and Cook County: Total 64.

NORTH SIDE

Alexian Brothers	Evanston Hospital
American Hospital	Grant Hospital
Augustana Hospital	Lake View Hospital
Chicago Polyclinic	Henrotin Hospital
Chicago Union Hospital	North Chicago Hospital
Children's Memorial Hospital	Passavant Hospital
Columbus Hospital	Ravenswood Hospital
Chicago General	St. Joseph Hospital
Evangelical Deaconess	Swedish Covenant Hospital

NORTHWEST SIDE

Lutheran Deaconess	St. Elizabeth's Hospital
Montrose Hospital	St. Mary's Hospital
Norwegian American Hospital	St. Francis Hospital

WEST SIDE

Columbus Extension Hospital	Presbyterian Hospital
Douglas Park Hospital	Robert Burns Hospital
Garfield Park Hospital	St. Anne's Hospital
St. Anthony's Hospital	University Hospital
Jefferson Park Hospital	West End Hospital
Mary Thompson Hospital	West Side Hospital
Washington Blvd. Hospital	West Suburban Hospital
Mt. Sinai Hospital	Frances Willard Hospital

SOUTH SIDE

Chicago Lying-in Hospital	Michael Reese Hospital
Fort Dearborn Hospital	Peoples Hospital
Hahnemann Hospital	Post Graduate Hospital
Illinois Central Hospital	Provident Hospital
Lakeside Hospital	Pullman Emergency Hospital
Mercy Hospital	South Chicago Hospital

South Shore Hospital
St. Luke's Hospital
Streeter Hospital
Washington Park Hospital

Wesley Hospital
Woman's Hospital
Jackson Park Hospital

ENGLEWOOD AND STOCK YARDS

Auburn Park Hospital
Burnside Hospital
Englewood Hospital

German Evangelical Hospital
St. Bernard's Hospital

Outside of Cook County: Total 45.

St. Francis	Macomb, Ill.
Holmes Hospital	Macomb, Ill.
Marietta Phelps Hospital.....	Macomb, Ill.
Chatsworth	Chatsworth, Ill.
Eureka	Eureka, Ill.
Wabash	Decatur, Ill.
St. Mary's Catholic Hospital.....	Decatur, Ill.
Macon County Hospital.....	Decatur, Ill.
St. Joseph's	Breise, Ill.
St. Mary's	Centralia, Ill.
Illinois Valley Hospital.....	Ottawa, Ill.
Zeigler Hospital	Zeigler, Ill.
Charleston Hospital	Charleston, Ill.
Chester State Hospital.....	Menard, Ill.
The Hale Sanatorium.....	Anna, Ill.
Drs. Cromwell and Cogshall.....	Henry, Ill.
Fairbury Hospital	Fairbury, Ill.
Springfield Hospital	Springfield, Ill.
Pekin Public Hospital.....	Pekin, Ill.
St. Clara	Lincoln, Ill.
Julia F. Burnham Hospital.....	Champaign, Ill.
Robinson Hospital	Robinson, Ill.
St. James Hospital	Pontiac, Ill.
Huber Memorial Hospital.....	Pana, Ill.
St. Elizabeth's Hospital.....	Danville, Ill.
Lake View Hospital.....	Danville, Ill.
St. Vincent's Hospital	Belleville, Ill.
St. Mary's Infirmary.....	Cairo, Ill.
People's Hospital	Peru, Ill.
Sterling Public Hospital.....	Sterling, Ill.
St. Mary's Hospital	Le Salle, Ill.
St. Mary's Hospital	Streator, Ill.
Morris Hospital	Morris, Ill.
St. Margaret's Hospital	Spring Valley, Ill.
St. Frances Hospital	Peoria, Ill.
Methodist Hospital of Central Illinois.....	Peoria, Ill.
The John C. Proctor Hospital.....	Peoria, Ill.
St. Vincent's Hospital	Taylorville, Ill.
St. Anthony's Hospital	Effingham, Ill.
Evangelical Deaconess Hospital.....	East St. Louis, Ill.
Moline Public Hospital	Moline, Ill.
Amboy Public Hospital	Amboy, Ill.
Julia Rucklett Perry Memorial Hospital.....	Princeton, Ill.
John Stuart Ryburn Memorial Hospital.....	Ottawa, Ill.
St. Mary's Hospital	Galesburg, Ill.

There still remain a few hospitals to be inspected, a few inaccuracies in the questionnaires to be corrected, when the committee will have all the data necessary upon which to base the classification.

The committee desires to express its appreciation to the officers of the Illinois Hospital Association for their valuable assistance, to the councillors of the State and of the Chicago Medical Societies for the inspection of the hospitals, and to the representatives of the Medical Colleges for their hearty co-operation.

Respectfully submitted,

J. V. FOWLER, Chairman,
RALPH T. HINTON, Secretary,
J. S. NAGEL,
C. U. COLLINS,
M. L. HARRIS.

Dr. Bell, Decatur, asked for an explanation on one point in Dr. Fowler's report. He said in Decatur there was a Catholic hospital with 60 beds, caring for surgical and medical cases and that each doctor takes care of his own cases. He wanted to know if an intern was appointed to that hospital, would he take care of the patients.

Dr. Fowler in reply said that the purpose of this committee was to furnish internes to the hospitals that desired them and in order to prepare for the reception of the internes it was necessary to see that the hospitals were properly conducted. There is a shortage of internes and will be for a few years to come, so that there will not be enough internes to go around, even to the hospitals that desire internes. Inasmuch as this classification is the point to be brought out, a hospital standardization is being prepared and these rules have been discussed back and forth by representatives of the hospitals, of the medical societies and of the medical colleges. It is merely a suggestion of standard. He said that the Board of Registration could adopt different rules, but inasmuch as these rules have been adopted by all the people of the state who had a word in this matter, he thought these rules would prevail.

It was moved and seconded that the report be accepted. Carried.

The chairman of the committee on relations to public health administration, Dr. L. Hektoen, Chicago, was not present to make the report.

Dr. President appointed a committee on resolutions consisting of Drs. C. B. King, Chicago, chairman; J. W. VanDerslice, Oak Park; C. J. Whalen, Chicago; J. H. Edgcomb, Ottawa, and O. L. Zelle, Springfield.

The meeting then adjourned until 9 A.M. Thursday.

Second Session

The house of delegates reconvened at 9:10 A.M., Thursday, May 19, 1921, and was called to order by the president.

The secretary, Dr. W. H. Gilmore, called the roll and announced that a quorum was present.

The minutes of the previous meeting were read and approved.

The next order of business was the election of officers.

Dr. E. P. Sloan, Bloomington, was nominated for president. It was moved that the secretary be instructed to cast the ballot for Dr. Sloan for president.

Seconded and unanimously carried and the ballot so cast.

Dr. A. W. Barker, Springfield, was nominated for first vice-president. It was moved that the secretary be instructed to cast the ballot for Dr. Barker for first vice-president.

Seconded and unanimously carried and the ballot so cast.

Dr. Henry J. Way, Chicago, was nominated for second vice-president. It was moved that the secretary be instructed to cast the ballot for Dr. Way for second vice-president.

Seconded and unanimously carried and the ballot so cast.

Dr. W. H. Gilmore, Mt. Vernon, was nominated for secretary. It was moved that the chairman be instructed to cast the ballot for Dr. Gilmore for secretary.

Seconded and unanimously carried, and the ballot so cast.

Dr. A. J. Markley, Belvidere, was nominated for treasurer. It was moved that the secretary be instructed to cast the ballot for Dr. Markley for treasurer.

Seconded and unanimously carried and the ballot so cast.

Dr. R. R. Ferguson, Chicago, was nominated as councillor for the Third District to succeed Dr. J. W. Van Derslice, Chicago. It was moved that the secretary be instructed to cast the ballot for Dr. Ferguson as councillor for the Third District.

Seconded and unanimously carried and the ballot so cast.

Dr. Henry P. Beirne, Quincy, was nominated as councillor for the Sixth District to succeed himself. It was moved that the secretary be instructed to cast the ballot for Dr. Beirne as councillor for the Sixth District.

Seconded and unanimously carried and the ballot so cast.

Dr. Charles W. Lillie, East St. Louis, was nominated as councillor for the Ninth District to succeed himself. It was moved that the secretary be instructed to cast the ballot for Dr. Lillie as councillor for the Ninth District.

Seconded and unanimously carried and the ballot so cast.

Drs. J. W. Van Derslice, Chicago; Henry P. Beirne, Quincy; C. E. Humiston, Chicago, and R. L. Green, Peoria, were nominated as delegates to the American Medical Association. It was moved that the secretary be instructed to cast the ballot for Drs. Van Derslice, Beirne, Humiston and Green as delegates to the American Medical Association.

Seconded and unanimously carried and the ballot so cast.

Drs. John E. Tuite, Rockford; Hugh N. MacKechnie, Chicago; R. R. Ferguson, Chicago, and W. D. Chapman, Silvis, were nominated as alternate delegates to the American Medical Association. It was moved that the secretary be instructed to cast his ballot for Drs. Tuite, MacKechnie, Ferguson and Chapman for alternate delegates to the American Medical Association.

Seconded and unanimously carried and the ballot so cast.

Drs. Warren Johnson, Chicago; R. Emmett Keating, Chicago, and W. P. Cannon, Kankakee, were nominated as members of the public policy committee. It was moved that the secretary be instructed to cast the ballot for Drs. Johnson, Keating and Cannon as members of the public policy committee.

Seconded and unanimously carried and the ballot so cast.

Drs. N. M. Eberhart, Chicago; E. Bowe, Jacksonville, and John R. Neal, Springfield, were nominated as members of the medical legislation committee. It was moved that the secretary be instructed to cast the ballot for Drs. Eberhart, Bowe and Neal as members of the medical legislation committee.

Seconded and unanimously carried and the ballot so cast.

Drs. C. B. King, Chicago; W. B. Cantrell, Bloomington, were nominated as members of the medico-legal committee. It was moved that the secretary be instructed to cast the ballot for Drs. King and Cantrell as members of the medico-legal committee.

Seconded and unanimously carried and the ballot so cast.

Drs. R. T. Hinton, Elgin; C. U. Collins, Peoria; M. L. Harris, Chicago; John S. Nagel, Chicago, and John V. Fowler, Chicago, were

nominated as members of the medical education and hospitals committee. It was moved that the secretary be instructed to cast the ballot for Drs. Hilton, Collins, Harris and Nagel as members of the medical education and hospitals committee.

Seconded and unanimously carried and the ballot so cast.

Drs. A. M. Geiger, Chicago; H. M. Camp, Monmouth; J. H. Walsh, Chicago; Hugh N. MacKechnie, Chicago, and E. W. Fiegenbaum, Edwardsville, were nominated as members of the relations to public health administration committee. It was moved that the secretary be instructed to cast the ballot for Drs. Geiger, Camp, Walsh, MacKechnie and Fiegenbaum as members of the relations to public health administration committee.

Seconded and unanimously carried and the ballot so cast.

The chairman then announced that the above officers had been duly elected.

The secretary then announced that since the presentation of the treasurer's report on Tuesday showing approximately \$16,000 in the medico-legal fund, he had received bills amounting to \$8,000. He asked whether it was safe to let the medico-legal reserve get below \$10,000, and whether the per capita tax of \$3.00 per year would take care of this. He therefore moved that the per capita tax be advanced to \$5.00.

Motion seconded.

Dr. C. S. Nelson, Springfield, said that if the members of the Illinois State Medical Society expected to receive adequate protection it was an absolute necessity that the per capita tax be raised. He further stated that in Christian county the medico-legal committee had just won in a malpractice suit. In this case the protection was just as good as that received from the Ft. Wayne Company or any other company to which a large fee is paid each year.

Dr. Baker, Chicago, said that the relative per capita tax is a matter of adjustment, but that he had felt for a long time that the dues of the society were inadequate for the purpose of taking care of the expenses if the society is to be operated for the best interests of its members. He had heard it stated that many members of the society found it difficult to pay \$6.00 a year. He

felt that if the society was not worth that to a medical man it was not worth much. He had for many years solicited the membership of the younger men in Chicago and found that they were most anxious to join. He was decidedly in favor of raising the dues to whatever amount was necessary to carry on the work in an efficient way, though he did not believe in raising them to a prohibitive amount, and to let each member do his part to carry on the work of the society. He was in favor of making the dues meet the needs.

The motion to raise the per capita tax to \$5.00 was unanimously carried.

The next order of business was the selection of a meeting place for next year.

Dr. J. S. Nagle, Chicago, presented an invitation to the Illinois State Medical Society to meet in Chicago in 1921.

It was moved that the invitation to meet in Chicago be accepted.

Seconded and carried.

Dr. W. H. Gilmore, Mt. Vernon, moved that the following addition be made to Section 2, Chapter VIII of the by-laws: "A per diem may be allowed at the discretion of the council."

Seconded and unanimously carried.

Dr. C. B. King, Chicago, presented the following resolution:

RESOLUTIONS

April 28, 1921.

RESOLUTIONS ADOPTED BY THE KNOX COUNTY MEDICAL SOCIETY

WHEREAS, We believe that continued progress in medicine will be best assured by all means that tend to develop certain qualities in physicians, notably that of initiative, etc., and that these qualities so essential to the making of a good physician are best developed under a competitive rather than a socialistic system; and

WHEREAS, We believe that the interests of the community in the treatment of disease will be best conserved by those measures that tend to increase the efficiency of the physicians of such community; therefore be it

Resolved, By the Knox County Medical Society that we are unalterably opposed to any effort to furnish medical treatment to a community by physicians employed and paid by the state; and further be it

Resolved, That our delegate to the State Medical Society be instructed to use his best efforts in conformity with the spirit of this resolution to combat state medicine, as now being foisted upon us in the

form of ambulatory state clinics, etc.; and further be it

Resolved, That a copy of these resolutions be given our state delegate, a copy be sent to the secretary of the State Medical Society, and another copy be sent to the secretary of our State Board of Health.

It was moved that the resolution be adopted as read.

Seconded and carried.

Dr. C. B. King, Chicago, presented the following resolution:

Resolved, That the Illinois State Medical Society is emphatically opposed to "State Medicine," and to any schemes for "Health Centers," "Group Medicine," Diagnostic Clinics, "Compulsory Health Insurance," either wholly or partly controlled, operated or subsidized by the State or National Government; and that the delegates from this Society to the American Medical Association be and are hereby instructed to present this resolution to the House of Delegates of the American Medical Association at its coming meeting in June and to use every possible means to secure its adoption.

Compulsory Health Insurance Committee, Illinois State Medical Society.

EDWARD H. OCHSNER,
GEORGE APFELBACH,
C. A. HERCULES,
E. W. FIEGENBAUM,
H. F. BRUNING,
CLEAVES BENNETT,
W. F. BURRES,
JOSEPH FAIRHALL,
W. D. CHAPMAN,
J. R. BALLINGER.

It was moved that the resolution be adopted as read.

Seconded and carried.

Dr. C. B. King, Chicago, presented the following resolution:

WHEREAS, The laws of this nation no longer recognize as legitimate any beverage spirits, and

WHEREAS, Undenatured ethyl alcohol has a legal and proper place in legitimate industry in connection with chemical, pharmaceutical or medical products, it is no longer proper that this product should be taxed 1000 per cent. of its value, and

WHEREAS, Narcotics are now properly tax free, although they sometimes find their way into illicit use the same as alcohol, in spite of careful precaution of those interested in their legitimate use, and

WHEREAS, Such tax is no aid whatever in the enforcement of prohibition laws and regulations, but rather has it resolved itself into a penalty of \$4.40 per gallon upon those who have occasion to use such undenatured alcohol in legitimate manufacturing or other processes, and

WHEREAS, Through foreign competition chemicals and pharmaceuticals from other nations where there is no federal tax on alcohol are able to compete to the detriment of American enterprise, and in the end the ultimate user pays the tax often increased many fold, and in view of the fact that all tinctures and most other medicinal liquids contain much alcohol, with a resultant financial burden on the sick, and mostly upon the sick poor, Therefore, be it

Resolved, That the Illinois State Medical Society believe that the federal tax on undenatured ethyl alcohol has outlived its usefulness; that such tax is a tax on the sick and on legitimate users thereof, and that the Illinois State Medical Society respectfully requests that our senators and representatives in Congress use their best endeavors to the end that the law and regulations taxing ethyl alcohol may be abolished, and that a copy of these resolutions be sent to each United States senator and representative from Illinois and that the Illinois delegates and alternates to the American Medical Association are hereby instructed to work for the adoption by the House of Delegates at the American Medical Association in Boston, for formal action memorializing Congress to this effect.

Submitted by Gainor Jennings, Delegate, O. S. M. A., Miami County Medical Society.

It was moved that the resolution be adopted as read.

Seconded and carried.

Dr. C. B. King, Chicago, presented the following resolution:

Resolved, By the House of Delegates of the Illinois State Medical Society, that we recommend to the Director of Health that the position of Inspector of Quarantine be under all circumstances a physician and that he be certified from a Civil Service list after a competitive examination.

C. J. WHALEN,
J. H. EDGCOMB,
O. L. ZELLE,
J. W. VANDERSLICE,
C. B. KING.

It was moved that the resolution be adopted as read.

Seconded and carried.

Dr. C. B. King, Chicago, presented the following resolution:

March 29, 1921.

Mr. W. H. Gilmore,
Illinois State Medical Society,
Mt. Vernon, Ill.
My Dear Secretary:

Will you kindly, in behalf of the Anaesthetists of the United States, submit the following resolutions for a Section on Anaesthesia in the A. M. A., to your

House of Delegates for consideration and favorable action:

WHEREAS, The safety of patients, the advancement of surgery and the requirements of hospital service demand the rapid extension of the specialty of Anaesthesia, therefore be it

Resolved, That the Illinois State Medical Society hereby petitions and urges the House of Delegates and the Council on Scientific Assembly to establish a Section on Anaesthesia in the A. M. A. during the Boston meeting, June, 1921.

This resolution is now being considered by the Council on Scientific Assembly and it has the endorsement and enthusiastic support of the incoming officers of the A. M. A. The resolution will be introduced in the House of Delegates by Dr. F. C. Warnshuis, vice-chairman, and will be seconded by delegates representing entire State Societies that have already acted favorably in the matter.

The resolution is also being supported by petitions signed by hundreds of fellows of the A. M. A. in all parts of the country.

In anticipation of a permanent Section the Council on Scientific Assembly has granted the anaesthetists, one of the sessions of the Section on Miscellaneous Topics of the Boston meeting for a program of pertinent papers.

The recent election of Dr. Wm T. Morton, one of the discoverers of anaesthesia, to the Hall of Fame and this the Diamond Jubilee Year of Morton's first use of ether makes the establishment of a Section of Anaesthesia a most appropriate event in the Progress of Medicine.

Awaiting favorable action in this matter, we remain in behalf of the Associated Anaesthetists of the United States.

Very respectfully yours,
(Signed) F. H. McMECHAN, M. D.,
Secretary Interstate and American Associations of
Anaesthetists.

T. T. FRANKENBERG,
Secretary National Anaesthesia Research Society.

It was moved that the resolution be adopted as read.

Seconded and carried.

Dr. C. B. King, Chicago, presented the following resolution:

WHEREAS, Our sister State of Missouri, yielding to prejudice and misinformation, has enacted a law amending the Medical Practice Act of said State, in which the word "reputable," which was synonymous for the word "efficiency," has been supplanted by the word "approved," which is ambiguous and misleading, and

WHEREAS, the medical profession of Missouri having the welfare of the people of that State at heart are using honorable means to secure a referendum on this great question; be it

Resolved, That we, the members of the Illinois

State Medical Society, do hereby extend our moral support to the Medical Profession of Missouri in their fight to protect the people against incompetency, inefficiency and a lowering of the standard of medical education and we trust a referendum will be accorded them, and, be it further

Resolved, That a copy of these resolutions be sent to the secretary of the Missouri State Medical Society.

C. B. KING,
L. O. FRECH,
CHAS. J. WHALEN,
J. W. VANDERSLICE.

It was moved that the resolution be adopted as read.

Seconded and carried.

It was moved by Dr. C. B. King, Chicago, that the House of Delegates go into executive session.

Seconded and unanimously carried.

At the conclusion of the executive session the annual meeting of the House of Delegates adjourned.

COOK COUNTY

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held on December 5, 1920.

The President, Dr. Alfred Lewy, in the Chair.

PRESENTATION OF CASES AND INSTRUMENTS

Dr. Joseph Beck showed a specimen of a brain from a case of multiple brain tumor. Many diagnoses had been made in the case by various neurologists who had seen the patient and made careful examinations, each of them having placed the lesion in a different part of the brain. When the patient was first seen by Dr. Beck, he diagnosed a frontal lobe abscess associated with frontal sinusitis. Operation decided upon, Dr. Beck exposed the frontal sinus and found it full of thick pus and the lining membrane markedly thickened. The naso-frontal duct appeared completely blocked. Nowhere could there be found any fistula or atrium towards the brain.

Leaving the area entirely separate and going into the aseptic area corresponding to the frontal lobe region, he found a thickened dura coming on from the posterior or cerebral surface of the frontal sinus. Upon opening this dura no abscess was found intradurally, or within the brain; there was nothing but the thickened dura, a piece of which he excised for subsequent microscopic study. After some time (five and one-half months) the patient succumbed to the disease. The symptoms during this period were exceedingly variable; there were tonic and clonic contractions of the feet, which disappeared, and mental and cerebellar symptoms became more evident.

Necropsy performed by Dr. Beck showed that each

of the diagnoses based on focal symptoms was correct. He found many encapsulated tumors, some of which dropped out when the brain was sectioned after hardening. These tumors were found in the cerebrum as well as the cerebellum, which accounted for the great variety of symptoms. At first Dr. Beck thought that the tumors were multiple syphilomas, but histological section showed that they were walled off carcinoma of the brain. Dr. Beck had never before known of this as a primary growth but in the literature he found two cases reported by Fraser and one man in Spain (cited by Greenwood of England) reported seven cases. It was interesting to note that Lewis Fisher, of Philadelphia, localized the lesion exactly corresponding to one of the lesions that were found postmortem.

Dr. Beck called attention to the method by which this specimen was imbedded in a block of paraffin, which made it very easy to display and he thought it would preserve them well.

Dr. Beck also showed two cases of unusual Bezold's abscess.

Dr. Edwin McGinnis showed a patient who had had a double frontal sinus infection, with an intranasal operation on both of them. The first operation was performed by Dr. Good eight years ago; at that time the anterior end of the middle turbinate was removed and the anterior ethmoid cells were rasped forward. Dr. McGinnis had seen Dr. Good perform this operation several times but thought he had not reached the frontal sinus in this case. The other side had been operated by the late Dr. Friedberg. In 1918, the patient entered the Presbyterian Hospital with severe frontal pain, and pain through the eye, but did not wish the intranasal operation again. All the landmarks were gone so it was decided to do an external operation. They opened through the eyebrow and made a little peek-hole through into the frontal sinus. The front wall of the sinus was one-fourth inch thick. On the floor of the frontal sinus there were two quite large polypi, one attached to the posterior and one to the anterior wall. The sinus was filled with pus. The polypi were removed, the base curetted and on going down gently into the nose, a couple of ethmoid cells were found that had not been touched by the first operation.

The other sinus was operated in August, 1920. An incision was made through the eyebrow, the brow elevated and a small opening made in the front wall. The case was interesting because all of the sinus lining was detached and the mucosa seemed about three-sixteenths of an inch thick.

The patient made a pretty good recovery with a freely movable scar; the discharge had cleared up and the nose was in about the same shape as before the operation. The Wassermann reaction was negative with both blood and spinal fluid.

DISCUSSION

Dr. E. P. Norcross asked whether Dr. McGinnis operated through the peek-hole, or whether he enlarged the opening.

Dr. McGinnis replied that he did a modified Lothrop operation, butting up through the nose. He had never been

able to use the bur successfully through the nose because it seemed to tear things so much. The septum was not removed in this case.

Dr. Walter H. Theobald presented a Thesis entitled "A Radical Treatment for Chronic Suppuration of the Antrum With Modification of the Canfield Technic for Operation." (Lantern Slides.).

(Abstract.)

The author stated that while acute infections usually yield to the conservative method of irrigation, in most cases of chronic antrum disease a permanent opening into the sinus is necessary. For this purpose an operation must be performed which will enable one to examine the interior of the antral cavity, watch the process of healing, remove the diseased or polypoidal mucosa, and maintain an opening that will not close within a few months' or even a year's time.

After briefly reviewing the steps in the development of the various operations on the maxillary sinus the technic of a procedure suggested by Dr. Pierce and used by Dr. Theobald was described in detail, and a few typical cases were reported.

The author cited the following advantages of this procedure:

1. Operation is performed under local anesthesia, with little reaction to the patient.
2. Operation may be radical or conservative, as judged by the pathological condition at the time of operation.
3. A view of the antral cavity is had which may be maintained during after-treatment.
4. No oral incision is necessary.
5. No suturing is needed.
6. It is a fairly simple form of antrum operation with all the results obtained by any of the other methods.

(To be continued)

MADISON COUNTY ORGANIZATION PRESIDENT'S ANNUAL ADDRESS*

EUGENE F. WAHL, M. D.
EDWARDSVILLE, ILL.

I think there is no subject of greater interest and of more importance to us as physicians than that of medical organization. Never in the history of the profession has the future appeared so uncertain and so precarious, and never have we been in such danger of losing the rights and privileges that belong to us as physicians. On every hand and at every corner lurks some fanatic with his favorite Public Welfare scheme, and, I am sorry to say, they are not all laymen; unfortunately some men ranking high in the profession are engaged in various propaganda, furthering their own selfish interests and sacrificing that of

*Read before the Madison County Medical Society at Godfrey, Illinois, on June 3, 1921.

the profession at large. It is high time that we rid ourselves of this type of friend.

I was asked the other day by a friend, an attorney, who had just lost a malpractice suit against a Madison county physician, why the physicians thought it necessary to have a well organized medical society. Was it for the purpose of protecting those members who were so unfortunate as to incur the wrath of some patient and be forced to stand trial for some real or fancied neglect? Was it for the purpose of rating the undesirable patients or for establishing and maintaining adequate fees?

My answer as I remember it was this: 1st, for the purpose of attaining a higher degree of social intercourse between physicians, thus giving each of us a better opportunity to know and understand our neighbor and to better appreciate the many good qualities that we will find he possesses, if we but have the opportunity to know him.

2nd. For the purpose of protecting our own interests and that of our patients, as well as that of the general public.

Gentlemen, if we could realize and attain all that the first reason implies, we would be more than repaid for our attendance at our monthly meetings, and we would have gone a long way toward making the practice of medicine the pleasure that it should be.

There is no need for me to recount the many instances of hard feelings, bitter words and thoughts that might have been avoided if the opportunity for a better acquaintance had been taken advantage of and ties of friendship formed, instead of harboring thoughts of jealousy and superiority.

A man can not hold himself aloof from his fellow practitioners and develop that broadness of mind and charity of thought that is essential to the physician of today. I am not preaching the principles of universal brotherly love, but rather the idea of respect and consideration for the attainments of others, the realization that the other fellow is deserving of as much credit as you are yourself, and that perhaps when the great game is over and the averages made out you will find that you have been out-hit by many whom you considered minor leaguers.

So much for our first reason for an organization. A volume could be written on the second; but as I mentioned before, I do not intend to weary you, especially as we have another paper this afternoon. I shall therefore touch on only the most important features concerning measures for our protection.

There is no valid reason why such matters as local fees, hours of work, local health affairs and anything else affecting the welfare of the physicians in any community should not be worked out to the satisfaction of all concerned by simply getting together in the proper spirit, threshing the thing out, and agreeing to that plan which gives each man a fair deal—and then adhering to it.

Far more important, gentlemen, are the legislative matters affecting the whole of us, every man and woman holding a license to practice medicine in the

state of Illinois; and I should like to call your attention to a few of the most drastic, of the many measures either proposed, or now before the legislature.

Every one of these is either for the purpose of giving some layman, or some combination, the authority to tell you what to do, or what not to do; or is to give some of the half baked faddists, the Chiropractors, Osteopaths, Cosmeticians and what not, the rights and privileges that belong to you.

I will give you briefly some of the essentials of a few of the bills proposed at this time:

House Bill No. 565 and Senate Bill No. 277 is a bill that would permit anyone to treat the sick by mechanical means, massage, gymnastics, exercises, etc., who has practiced this "science" for five years.

He could only diagnose human ailments and prescribe or administer drugs under the direction of a duly licensed physician. This might easily be construed as permission by letter or by telephone and would no doubt be so utilized by many. Any unscrupulous physician might have a dozen of these quacks on his staff and authorize all of them to prescribe for their patients.

Senate Bill No. 1 was a bill to exempt optometrists from jury duty. Can you conceive that their patients are in such need of their services that jury duty would work a hardship upon them?

Senate Bills No. 10 and 134 were maternity bills introduced by Senator Glackin of Chicago, providing for the care of maternity cases by the state, thus making charity cases out of many that are well able to pay for such service.

It would be a fine thing to have a maternity bill that would really be efficient, but the people that are in need of such service are already provided for in practically every community, and the great danger of such a measure is in leading our foreign population to believe that this is a land of plenty, where the state takes care of all regardless of their ability to pay; this is not teaching them good citizenship and is conducive to creating the impression that they do not have to meet their obligations.

Chiropractic Bill No. 359 provides for a side door entrance for the chiropractors. There is no disposition on the part of the doctors to dictate or to curtail any method of treatment, but it is only right and proper that minimum educational requirements be met before a license to treat the sick be given anyone.

Our fight on this bill is not from a selfish interest; it is only just that a fair standard be set for all; and that this standard be met by any and all who wish to treat human ailments.

House Bill 213 is known as the Cosmeticians' Bill and provides for the regulation of cosmetic-therapy, which is the art of systemic stroking or manipulation, and the use of electricity on the scalp, neck, shoulders, hands and feet. It is interesting to contemplate the results of such treatment on an initial syphilitic lesion of the lip or face.

There are several other bills of more or less importance, but I have mentioned enough to show the gen-

eral trend of such measures. Although the situation in the State of Illinois is bad, we are much better off than some of our neighbors, for instance the physicians of Missouri awakened to find House Bill No. 288 passed, and signed by a Governor who believes that the treatment of a sick child can safely be administered by a graduate of a *legally chartered medical school* instead of a *reputable medical college*, which was the former law.

Can that happen in Illinois? It most certainly can if you do nothing to oppose it?

A letter from Dr. C. V. Chapin, Superintendent of Health of Rhode Island, says, "I fear the Osteopaths are already licensed in the State, and I also fear that the Chiropractic Bill will soon be passed, as they have been working on the politicians for two years and have a large fund set aside for that purpose.

Another letter from Dr. Edward Quick, of Milwaukee, Wisconsin, in part says, "We have about reached the point in Wisconsin where we are going to let the public have all the quacks they want."

Michigan narrowly escaped a catastrophe with her Chiropractic Bill and it was only by a herculean effort that the day was saved, by having over 2,000 telegrams, representing over 50 per cent of all the doctors of the State poured in on the legislators at the propitious moment.

Oklahoma Chiropractors are jubilant as they have just passed a bill creating a separate board of examiners.

New Jersey physicians lost their fight in several health measures.

The situation is the same in many other states. There seems to be a general growing tendency to lower requirements to practice medicine.

Now, gentlemen, what is the answer? Are we to sit idly by and let the Osteopaths, Chiropractors, Faith Healers, and the like, go on and on poisoning the minds of our Legislative Bodies?

What use to arise and discuss these questions at our medical meetings, or to write articles in protest for our medical journals? Neither the public nor the legislators attend our meetings or read our journals, and neither would display any great interest if they did so.

Allow me to quote a paragraph from the last number of the ILLINOIS MEDICAL JOURNAL: "A New York physician had approached a State Senator in regard to some legislation that the medical fraternity was interested in and the Senator after listening to what the doctor had to say handed him this solar plexus blow: "Your doctors are the dearest people on earth and we love every hair in your heads, but as a class you are pitiable; you spend your time, money and energy for the advancement of science and the betterment of mankind and you don't know the first thing about self-preservation. The propagandists are organized; you are not, and you are not even well informed. You are wasting your time at the capitol. *Go home and organize.*"

This is certainly plain enough and hits the nail

squarely on the head, and unless the medical fraternity organizes itself on a more secure basis and if the members as individuals do not sit up and take notice of what is going on around them and make a concerted effort to get in the game and display some political activity, then the battle will eventually be lost.

SCHUYLER COUNTY

The Schuyler County Medical Society held a meeting at Rushville, Friday evening, June 17, 1921. Dr. Ben D. Baird, Galesburg, gave an excellent talk on "Fracture of the Femur." Dr. Harold M. Camp, Monmouth read a very interesting paper on "Pelvic Infection with Special Reference to Treatment."

There were two visitors present from Jacksonville, Drs. Cole and Norbury.

On motion by Dr. Monroe, seconded by Dr. Harvey, a rising vote of thanks was extended to Drs. Baird and Camp for their very interesting and instructive discourses.

The meeting adjourned and all present went to Bryant Cafe and enjoyed an excellent fried chicken supper. Eight members were present

C. M. FLEMING,
Secretary.

Personals

Dr. John A. Kappelman, formerly of Chicago, has recently resigned as health commissioner of Canton, Ohio. Since his appointment in 1919 the personnel of the department has increased from six to sixteen, the health appropriation was increased from \$15,000 to \$50,000, and the death rate of 11.6 in 1919 was reduced to 10.2 in 1920.

Dr. Wellington T. Stewart has removed to the new Sheridan Plaza hotel where he will be house physician, but will retain his office in the Field building, 110 N. Wabash avenue.

Dr. Robert Hayes, Chicago, held a tuberculosis clinic in Morris, June 15, under the auspices of the Grundy County Sanatorium Board.

Dr. Carlos Chagras of Brazil gave two lectures on American trypanosomiasis at the University of Chicago, June 22 and 23. During his visit he was entertained at dinner by the Institute of Medicine of Chicago.

News Notes

—The Chicago Medical Women's Club elected the following officers at the annual meeting, June 2: President, Dr. Katherine B. Rich; first vice-president, Dr. Nora Rager; second vice-

president, Dr. Mary B. Hanks; secretary, Dr. Blanch A. Burgner; treasurer, Dr. Margaret Rogers Riley. Delegates, Drs. Rich and Burgner.

—The Chicago section of the American Chemical Society presented Madam Curie with the eleventh Willard Gibbs medal at a reception and dinner at the Congress Hotel, June 14.

—All formulae of Dr. A. S. Horovitz are now manufactured under his personal supervision at the Horovitz Biochemic Laboratories, 220 East Fourth street, Cincinnati, Ohio.

—John Barleycorn may not feel the pressure of the new state law—at least not until money is appropriated for enforcing it.

—The class of 1889 of Rush Medical College, in accordance with a custom adopted on its thirtieth anniversary, held a reunion recently as the guests of Dr. Frank Boyd, Paducah, Ky. Drs. Henry A. Norden, Otto Wernicke, George F. Butler, John Minahan, E. P. Rice, Henry De Buy, Herbert Robinson, E. W. Kellogg and H. A. Tyler accompanied Dr. Boyd on a trip from Paducah to Florence, Ala., up the Tennessee river. Last year the class visited Dr. E. B. Cooley, Danville, Ill., and in 1919, Dr. J. Minahan, Green Bay, Wis.

—The annual meeting and banquet of the Alumni Association, College of Medicine, University of Illinois, was held at the Hotel Sherman on June 10, 1921. Among the speakers were W. L. Abbott, Wm. E. Quine, D. A. K. Steele, M. Robert Weidner and J. Franken. Officers elected for the coming year: President, Lewis J. Hammers, '02; president-elect, Wm. M. Crosier, '07; first vice-president, Wm. H. Bradley, '10; second vice-president, Chas. M. Davison, '20; third vice-president, Chas. Ryan, '09; secretary and treasurer, John M. Krasa, '13; alumni councilor, Robert W. Morris, '02; member executive committee, W. E. Potter, '00; necrologist, M. Robert Weidner, '83.

Marriages

PHILIP LEWIN to Miss Merriel Mayme Abbott, both of Chicago, May 26.

HARRY L. ROSE, Chicago, to Miss Beatrice Slinger of Charles City, Iowa, June 9.

ANDREW ROBERT WARNER, Chicago, to Miss Gertrude Elizabeth Schnaitter of Sandusky,

Deaths

George Frank Butler, Winnetka, Ill., Rush Medical College, Chicago, 1889; a Fellow A. M. A.; died from heart disease, June 22, aged 64. Dr. Butler was born in Moravia, N. Y., in 1857; he was lecturer in pharmacy and materia medica in his alma mater from 1889 to 1892; professor of materia medica, therapeutics and clinical medicine Northwestern University Woman's Medical School, 1890-1896; professor of same subjects in the College of Physicians and Surgeons, Chicago, 1892-1906; professor of medicine in the Dearborn Medical College, 1905-1906; professor of internal medicine in the Chicago Post-Graduate Medical School, 1905-1907, and professor and head of the department of therapeutics, Chicago College of Medicine and Surgery, 1906-1915. He was for a time consulting physician to the Cook County Hospital. He had been director of the Alma Sanatorium, later medical director of the Mudlavia Springs Sanatorium, and recently of the North Shore Health Resort in Winnetka. He was the author of numerous books; his medical works devoted chiefly to materia medica and therapeutics, and non-medical books, including fiction, essays and poetry. His most recent books were on mental hygiene and included "The Travail of a Soul," 1914, and "How the Mind Cures," 1921.

GIDEON VON BACHELLE, Chicago; Rush Medical College, 1867; a veteran of the Civil War; died, May 23, aged 75.

JOHN A. BAILEY, Biggsville, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1877; a practitioner of Biggsville for nearly half a century; died May 17, from cerebral hemorrhage, aged 76.

ANDREW J. GOURLEY, Lickcreek, Ill.; Kentucky School of Medicine, 1890; died, May 31, from paralysis, aged 59.

JOHN ANDERSON INGLES, Hoopston, Ill., (license, Illinois State Board of Health, 1878); died, May 4, from pneumonia, aged 83.

WILLIAM T. JOHNSON, Eldorado, Ill.; Missouri Medical College, 1894; member of Illinois State Medical Society; died, May 24, from carcinoma of the stomach, aged 54.

MAHLON LINDLEY, Urbana, Ill., (license, Illinois years of practice, 1878); died, May 14, aged 87.

JOSEPH MATTESON, Chicago; North Western University Medical School, Chicago, 1878; died suddenly, June 1, aged 72.

WARNER HUGH MAUZEY, Findlay, Ill.; Louisville (Ky.) Medical College, 1898; died, May 17, from cerebral hemorrhage, aged 54.

ANNE LAURA MILLER, Chicago; Chicago College of Medicine and Surgery, 1914; died, June 9.

JAMES SAUNDERS, Glenellyn, Ill.; Bennett Medical College, Chicago, 1881; died, May 19, aged 75.

EDWARD H. THOMAS, Argenta, Ill.; Columbia University College of Physicians and Surgeons, New York, 1883; died, May 22, aged 62.

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Original Articles

THE LESSONS OF THE WORLD WAR FOR THE INTERNIST

(Continued from page 45)

HARLOW BROOKS, M.D.

NEW YORK CITY

A further relation between mental and nervous diseases and internal disturbances must be recognized in the many deviations from morality and in the neglect of personal and public hygiene which lead on to the actual mental disease. Crime or alienation can doubtless be recognized and is often to a large extent obviated by an appreciation of the very important role which abnormal or disease environment, bad sanitation and example, and physical and mental depression play in the evolution of the internal diseases, especially in the spread and violence of epidemics.

Certain incomplete and fragmentary studies conducted in association with neurologists and psychiatrists in the service have further suggested to me that a more careful study on the part of the physician of the aberrations of delirium may in large part alleviate or control these symptoms by the application of well recognized psychic methods. We have doubtless allowed convalescent cases of typhoid or pneumonia to suffer untold agony and to have their physical stamina seriously impaired as a result of not correctly managing these cases of disturbed mentality, notably those occurring after the infections.

Probably of greater value to the internist than any other line of special study which army service afforded has been that of the infectious diseases and particularly those of epidemic type. As never before, either in practice, in my hospital service or in college, have I so keenly grown to appreciate and comprehend the science of epidemiology. The work of such men as the Vaughans, father and son, and of others specially

skilled in this relatively new branch of internal medicine has shown us, as can be found in no text-books, or in any previous published studies the relations and conditions which exist in the spread of infection. From these it is a comparatively simple matter to deduce methods of prevention and circumscription. Though in many instances it is difficult to apply this now well based knowledge, either in military or civil communities, and I believe much more so in the latter rather than the former; the time is certainly coming when the universal application of the results of such studies as were made will greatly lessen the occurrence and morbidity of the various infectious diseases.

Typhoid fever has been the great military medical disease of the past. In most wars the death rate from it alone has almost equalled or even exceeded the losses from legitimate military wounds, as for example, in the Spanish-American war. In this last war, notably in our own army, typhoid fever may almost be said to have been a negligible matter, as it certainly was in the home camps, that is in so far as rate of occurrence is concerned. Compare for a moment the typhoid occurrence under the infinitely more favorable conditions existing during the Spanish-American war with those of this far more difficult and exhausting type of warfare and the contrast is most striking. Transfer the percentage of typhoid cases in that conflict to the number of our men engaged in the world war, in which nearly two millions of our men lived for months under most difficult and unfavorable physical and sanitary conditions. In our army a total of over 414,760 cases of typhoid fever should have occurred against an actual total of certainly under two thousand if we may compare with the typhoid rate of our troops during the Spanish-American war. This has been the direct and almost sole result of typhoid vaccination, the remarkable efficiency of which can only be appreciated by those who saw the two wars.

It has, however, been shown quite as was ex-

pected to be the case that typhoid vaccination is not infallible and that superinfection, such as was present in many areas, particularly in camps recently evacuated by the Germans and immediately taken over by our troops before sanitation of the battlefield was possible, was followed by the outbreak of minor epidemics. Vaughan (the late Major Walter Vaughan) has shown in his posthumous study of the typhoid of the A. E. F. that the disease differs in no important particular from that of the unvaccinated; if anything as I saw it, it is rather more severe and more difficult of diagnosis. Notwithstanding the abundant opportunities for widespread infection from unavoidable infected water sources and the universal insanitary conditions of old battlefields and camps of the enemy, I believe that the work of Zinsser, Siler, Abbott and others associated with them showed beyond question that most epidemics were spread chiefly through the agency of carriers in the kitchen personnel. It has been shown very definitely that while the protection of vaccination may prevent automatic personal infection in probably very many instances it has no effect whatever in the elimination of carriers, and universal vaccination in no way protects against this menace.

The definite knowledge that massive dosage will cause infection in individuals, no matter how efficiently vaccinated has thrown a good deal of question on our previous ideas as to the probable efficient duration of the protection afforded by vaccination. The general consensus of opinion now appears to be that for the protection of persons exposed to heavy dosage infection the safest results are reached when revaccination is practiced at relatively frequent intervals; at least once yearly where constant likelihood of exposure exists. Sanitary precautions against typhoid are by no means unnecessary because of the efficiency of vaccination, they are only less imperative.

The experience of the war apparently emphasized the superiority of three graded vaccinations given at intervals of a few days rather than the administration of a single dose suspended in oil. Various factors, which need not be discussed here, apparently contribute to this result.

Now that typhoid has been deposed from its supremacy as the most important military disease, pneumonia has replaced it in this regard. Many factors not readily eliminated exist in the

military life which predispose to this disease in higher percentage than occurs in civil conditions. Vaughan estimates pneumonia to be about twelve times as frequent in military as in civil life and the death rate also appears to be higher in the army. Chiefest among the factors notably predisposing to pneumonia under military conditions, are the necessary exposure, adequate protection against which by proper clothing, feeding, etc., are often impossible under active military conditions.

The frequently inevitable over-crowding in barracks, tents or dugouts is another important factor which need not exist in civil life, though it is often seen here. Improper, insufficient and irregular feeding is another contributory cause which must not be underestimated. Still another and very important factor is to be found in the broken and inadequate rest which the soldier on active duty must be content with. The dust inhaled on the march, the fumes of explosives and latterly those of the various military gases have all greatly added to the predisposition of the militant soldier to pneumonia because of the irritation of the respiratory channels. All these occupational factors greatly predispose toward this disease and serve to render it particularly a military one. Doubtless pneumonia will remain the military disease until we are able by some artificial means to render the upper respiratory mucosa immune against inoculation with the large group of organisms capable under favorable conditions of producing pneumonia.

A predisposing factor easily demonstrable under military conditions but less obvious in civil surroundings is the very great one which transference of contagion exerts, especially in the broncho-pneumonias. In properly evaluating this factor one must, however, constantly hold in mind the frequency with which groups, and often very large ones, are submitted under military conditions to like predisposing factors. Medical literature during the past three years has been so largely given over to the discussion of the pneumonias and empyemas that I feel it is hardly wise at this time to attempt to review the tremendous lessons concerning this disease which the war has taught us. I must content myself by merely mentioning the importance of predisposing factors, the relatively high degree of

contagiousness and the large number of organisms which are concerned in the production of the pneumonias which are indistinguishable clinically or pathologically. We can no longer look upon pneumonia as a single definite specific infection, neither can we longer make any other than a mere anatomical differentiation between lobar and broncho-pneumonia. We now realize that organisms other than the pneumococcus may produce pneumonias indistinguishable anatomically or clinically from those caused by the pneumococcus and on the other hand we recognize, I trust fully, that the pneumococcus group of organisms may produce any of the forms of so-called broncho-pneumonia.

McCallum has made a special study of the pathology of the particularly virulent epidemic type of pneumonia so prevalent in the earlier months of the war and clinically characterized by early and extensive infection of the serous sacs. He points out the recognized fact that epidemic types of pneumonia probably identical to this one were recorded as far back as the 16th century. It has apparently always been a particularly military type of pneumonia and in 1790 Desauvage described the disease among soldiers in France. Noah Webster described a similar type occurring in Connecticut in 1717, 1719 and 1795. James Mann, a surgeon of the American army, described a similar military epidemic in a book published in 1816 and he points out practically all of the essential clinical and gross pathological characteristics of the disease. One of the very best descriptions of the lesions of the disease is found in an old series of clinical lectures given by Dr. Delafield of New York. Time does not permit us to go intimately into this or the clinical phases of the infection with which you are all thoroughly familiar at least from the abundant literature, but one of the most important features of this epidemic form of pneumonia as well as of all others which occurred in the army was the frequency with which reinfections could be traced to a new type of pneumonia producing organisms introduced to a new soil. Crossed infections were particularly serious problems in our pneumonia wards, since it often necessitated quite rigid quarantine methods, otherwise cases convalescent from one bacterial type of pneumonia would fall ill from a new type of organ-

ism, conveyed perhaps from other cases or through the carelessness of attendants.

In at least three camps to my personal knowledge, (Upton, Devens and Custer) this particular infection followed the introduction into these camps of infected battalions of colored troops from the south.

One of the most important demonstrations arising from the intensive study of pneumonia conducted during the war was the full demonstration by Russell Cecil of the usual route of infection in pneumonia. He showed definitely as a result of his experiments on monkeys that the disease is introduced after the conception of the older students through upper respiratory tube infection rather than as an hemic infection. Zinsser had already pointed out how catarrhal "colds" by increasing naso-pharyngeal exudation brought down from old infected sinuses much new and highly infected material, so favoring pneumonic and other respiratory disease.

Another most important phase of the pneumonia of 1917-18-19 which must be mentioned, though it cannot be considered far today, is the frequency with which it has developed after other infections and particularly after measles. Vaughan and Palmer, after their extensive analysis of the figures furnished the Surgeon General's Office concerning this matter, make the extraordinary but entirely correct statement that "of every 1,000 men with measles, 44 have pneumonia and 19 die. Of every 1,000 men without measles, 17 have pneumonia and 2 die. Thus a person with measles is ten times as likely to die as a person without measles."

Under civil conditions this close relationship between pneumonia and any disease condition which causes catarrhal processes in the upper respiratory channels is less apparent than when it is studied in the very large groups and in the very early, premonitory stages possible only in large compact groups of men, but it doubtless exists fully as certain in civil as in military epidemics.

Lack of time and also the very general adequate understanding which exists at large in the profession of the valuable war studies on influenza decides me also to pass over this subject with all its great importance in a most rapid and cursory manner. I think we must all admit that notwithstanding much excellent work, such as Cecil's, to the contrary, our faith in the specificity of the influenza bacillus as the cause of this in-

fection has been much shaken or practically overthrown nor do we seem any nearer to a definite knowledge as to the real causative factor concerned in the disease. Doubtless one of the most important and suggestive discoveries concerning this disease has been the demonstration of the universality and long persistence of infections of the head sinuses in the disease and the probable explanation of the frequency of complications, reinfections and extensions on the basis of this lesion.

While pneumonia was by all odds the most important complication of all the epidemics of influenza which occurred during the war, all the other usual ones were also occasionally seen and in addition a new and quite striking one in areas of Zeneker's degeneration, chiefly located in the lower portion of the recti abdominis but occasionally also in the abdominal obliques and in the psoas muscles. The entire time allotted to this address could be profitably spent I believe in a discussion of the subject of the war influenzas and the lessons which they have taught us but here also the literature has been unusually complete and you are probably more familiar with this subject than with some other phases of the war medicine, hence I shall pass on with this mere reference to the subject. I cannot refrain, however, from the further statement that notwithstanding the terrific exposure and exhaustion present in the soldiers of the fighting lines, the influenzal cases at the front seemed less frequent and less severe than those in the S. O. S. The probable reason for this fact lies in the question of crowding and transference of infection.

Before going further in our discussion of the knowledge which study of the infections during the war has given us there are certain general characteristics which apply to nearly all of them which has contributed very much to our general information in this respect. Notable among these is the great benefit which has come to all of us in the privilege to study enormous groups of infections and therefore we have been more readily able to perceive certain features in regard to them only apparent in large groups of cases. This has been particularly true of epidemiological studies and those of individual as well as of general susceptibility.

Many pet theories have been exploded as a result of these studies. For example, it has long been popularly supposed that the "healthy, sturdy

country boy" was far more physically capable and much less liable to sickness than his city brother. Just the opposite has been the case for the city boy has been found much less susceptible to the usual infections, probably because susceptible material among them has been long exhausted before they arrive at the military age. In every epidemic the rural recruit has been the chief sufferer. The city boy is also more resistant toward exposure, broken rest, irregular food and the other hardships of military life. To the surprise of all except trained soldiers, the city boy has been found to make the best soldier, in so far as adaptation to military life and customs are concerned. Bravery is of course independent of race, creed, habitat or environment and so also is personal adaptation though perhaps here also the city boy has from a wider experience the better chance.

Another very striking fact appears obvious, namely, that as regards practically all the infections except the venereal ones, which are far more prevalent in civil population than in such an army as we gathered together for the Great War, there is a marked increase in occurrence in the military as compared to civil population of the same age. Vaughan and Palmer have thus shown that measles is about 19 times as prevalent in military camps as in civil population, pneumonia about 12 times, cerebrospinal meningitis 45 times, scarlet fever 6 times, diphtheria twice but tuberculosis is 13 times as prevalent in the civil as the military population and the venereal infections many times more even.

It is noteworthy, however, that when the military group is gathered from but one locality, that the disease occurrence in the army stands at about the same as in the civil population from which it was taken. For this reason there can be no question whatever but that for training purposes it is far better to segregate into distinct regiments or brigades troops drawn from the same locality. Not only is the esprit de corps higher, and the entire military efficiency greater under such a procedure, but there is also a tremendous advantage from the standpoint of the epidemiologist and medical officer in the smaller disease occurrence.

The great danger of brigading troops from different localities together, particularly during epidemics, was frequently illustrated in our training camps. For example, Camps Custer, Upton and Devens were strikingly free from pneumonia,

only occasional sporadic cases being seen, until each camp received an increment of colored troops from the south, all highly infected when they were ordered to these northern camps. Soon after their arrival these healthy camps became seriously involved by the epidemic. It is noteworthy to remark that at Upton nearly a brigade of colored troops had already been mobilized, and the sick rate among them had remained as good as with the white troops, but these colored recruits had been drawn, as had the white soldiers, almost exclusively from the city of New York, that is from the same sanitary environment. In so far as could be determined there was no difference in susceptibility to the imported infections between the New York white and the New York colored troops.

(To be continued)

RADIUM EMANATION IN THE UPPER AIR PASSAGES AS COMPARED TO RADIUM; A METHOD OF APPLYING IT WITH ESPECIAL REFERENCE TO LARYNGEAL CARCINOMA*

OTTO T. FREER, M.D.

CHICAGO

Since November, 1919, following the installment by Dr. Frank Edward Simpson of the first and so far only radium emanation plant in Chicago, I have supplanted radium proper in raying the upper air passages by radium emanation. This has resulted in so extraordinary a gain in the efficiency of the treatment, especially in carcinoma of the larynx, that it has completely changed the prognosis for me in malignant affections of the throat from uncertain or bad to favorable in all early cases.

For those who know little about emanation and its production I give a brief description here. Emanation is a gas given off from radium that possesses all of radium's properties. Just as does radium it discharges alpha rays, large particles that have poor penetration so that they may even be screened off by a few thicknesses of paper; beta rays, divided into soft beta rays with little penetration and hard beta rays that

pass readily through a millimeter of silver, and gamma rays, rays of immense penetration that will go through a heavy lead plate. Of these rays the alpha rays and the soft beta rays are shut off by a proper thickness of metal, usually silver or brass, as their action produces an undesirably strong inflammatory reaction in the integument liable to result in sloughs, so-called burns. The hard beta and the gamma rays are the ones that produce the desired effect upon morbid states while they produce but little reaction. They readily penetrate metal that is a millimeter thick and that will screen off, as it is phrased, the alpha and soft beta rays.

Emanation is given off by radium or its salts continuously and for therapeutic use it must be collected and encapsulated in minute sealed glass tubes. To get enough emanation for practical use at least one gramme of radium is needed as the source of supply. The radium is kept in a glass receptacle in a safe, a glass tube leading from this receptacle to a series of mercury vacuum flasks called purification chambers, as they remove gaseous impurities from the emanation. These flasks are partly filled with metallic mercury which, acting as a valve, lets the emanation gas, forced by a powerful electric vacuum pump, pass from one chamber to the other until finally the emanation collects, in the form of a chemically inert, fluorescent gas at the end of the system of flasks in a terminal capillary glass tube no thicker than a horse hair. Little pieces of the capillary tube are then sealed and severed by a Bunsen flame, each tube containing a certain amount of emanation whose strength is tested in a special testing apparatus and noted in millicuries, a millicurie being the exact equivalent in radioactivity of a milligramme of radium. The capillary glass tubes contain a charge of from 30 up to 400 millicuries of emanation according to the length of time that emanation has been pumped into them. Each capillary glass tube is next placed in a silver tubule $\frac{5}{8}$ of an inch long and 3-32 of an inch in diameter, (Fig. 1 A) each tubule being enameled in a color differing from that of the others to indicate the strength of the capillary emanation tube it contains. The enameled silver tubules act as screens to shut off the undesirable alpha and soft beta rays

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while the hard beta and the gamma rays readily pierce their walls. In the small size of these

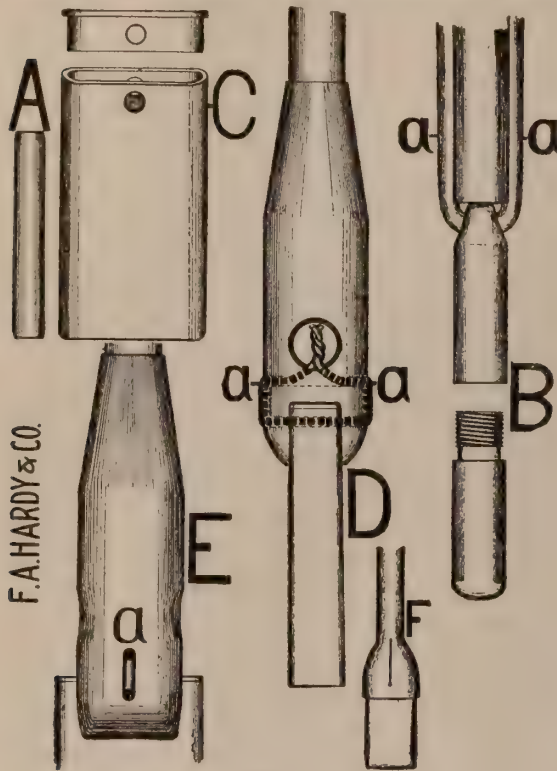


FIG. 1.

Figure 1. A. Enameled silver tubule containing glass emanation tube which may be charged up to 400 milligrams. Length of silver tubule 5-8 of an inch. Diameter 1-32 of an inch.

B. Capsular screen fastened to tubular copper applicator at a—a by means of copper wire soldered into grooves at side of applicator and running through eye of screen. It holds only one silver emanation tubule.

C. Silver case screen with cover wall a millimeter thick. These screens hold from 2 to 5 silver emanation tubules according to their breadth.

D. Silver case screen seen on edge, fastened into notch of holder by number 24 copper wire a—a shown by heavy dotted line to indicate passage of wire through jaws of notch, walls of screen and its cover and thence into interior of tubular holder through holes at a—a. The wire is shown twisted in the saliva hole of the holder in order to lock screen safely to holder.

E. Holder and case screen seen on the flat to show the holes at a, connected by a groove, and bored to pass copper wire through jaws of notch, screen and its cover and thence into the interior of the tubular part of the holder.

(The author has just completed a case screen holder in which the screen is held by a socket instead of the jaws of a notch. It has proved to be an improvement as the screen is held with absolute firmness. It is inclined to rock a little in the notch.)

silver tubules lies a great advantage of emanation over radium proper in the treatment of

nose and throat affections, for, while a single tubule, if needed, may be charged with as much as 400 millicuries and yet occupy an insignificant space no greater than that filled by a feebly charged tubule, even as small an amount of a radium salt as 30 milligrammes requires so large a container that it is impractically bulky because of the throat irritation its size would cause in the larynx or of the narrowness of the space it would not enter there or elsewhere, yet it would be of such inadequate strength as to be of doubtful therapeutic effect in the state most often treated, malignant disease. Really effective strengths of a radium salt, 50 to 200 milligrammes, would take up so much space with their containers in the larynx as to obstruct respiration and be intolerably large foreign bodies. Not only is the regular container of the radium salt used impractically bulky for use in the throat because of its size, the dimensions of the radium package must be still further increased because the costliness of radium makes it impractical to reserve it for throat use alone so that its container, or screen as it is called, cannot be permanently fastened to the applicator that introduces the radium into the throat, but must be detachable and therefore requires a second larger screen that may be opened and shut to enclose it, so still more adding to the already excessive size of the radium package. In contradistinction the screens that enclose the enameled emanation tubules described are so small that they are easily tolerated in the larynx and even in the glottis, while increasing the emanation dose does not add to the bulk of the screen and its contents. Thus, while radium itself may be used only in barely sufficient amount to effectively ray the center of a malignant growth of ordinary size, not enough of it can be applied to the tumor to influence its periphery and suspicious neighborhood so that disappointing extensions are sure to occur. Emanation, however, may be used in such overwhelming strength that it will effectively penetrate not only all of the diseased but also surrounding doubtful regions with dense radium rays well into the healthy tissues, so arresting cell division in all of the microscopic cancer cell foci present.

The demands for proper radium raying in the

upper air passages in malignant disease are that the source of the rays be as little bulky as possible and yet have great strength; to obtain its full effect this source must be placed exactly over the region to be rayed and directly upon it and must be kept unmoved in this position as long as needed. All of these demands are met by the use of emanation and the use of the apparatus about to be described in this article.

The Method of Application of the Emanation and the Apparatus Employed. In my earlier work when radium emanation was not at my disposal I used the radium needles of Dr. Frank E. Simpson introduced into the tissues by a special introducer made by me and pictured and described in the Transactions of the American Laryngological Association for 1918 and also described and shown in illustrations in the *Journal A. M. A.*, without credit to me, by Dr. Robert Herbst. The needle and introducer were also shown by me in an article in the Killian Festschrift number of the *Archiv für Laryngologie* for 1920. These needles are the next best thing to emanation in the treatment of malignant growths of the upper air passages but possess the following drawbacks: They are liable to create deep sloughs where they are inserted that may lead to severe hemorrhages; the pain following their use is severe and may be prolonged for months; patients, in promising cases, sometimes refuse to be needled as the procedure seems an operation to them; the needles are unsuitable for small innocent growths and non-malignant inflammatory states; the result from sufficient amounts of emanation accurately placed is surer and while emanation, as stated, reaches the utmost limits of the affected area, the radium needles are apt to leave uninfluenced a peripheral zone of hidden foci of disease. Therefore, for the past year and a half, I have ceased needling with radium needles and, to preserve the precision with which the needles may be placed in the diseased area, it has been my aim to make the placing of emanation in the throat equally accurate. By repeated changes and improvements in the apparatus created I have finally succeeded in this purpose and can now apply emanation anywhere in the throat or nose, even upon so small an object as a vocal

nodule with accuracy, the emanation staying in place as long as needed, the ordinary laryngeal mirror merely being used for its introduction.

The fundamental principle of the method is the use of a strong clamp (Fig. 2) (Fig. 3) fixed upon the forehead by a headband and holding in the larynx or pharynx tubular applicators (Fig. 3) ending in the container, or "screen" as it is technically called, that holds the emana-

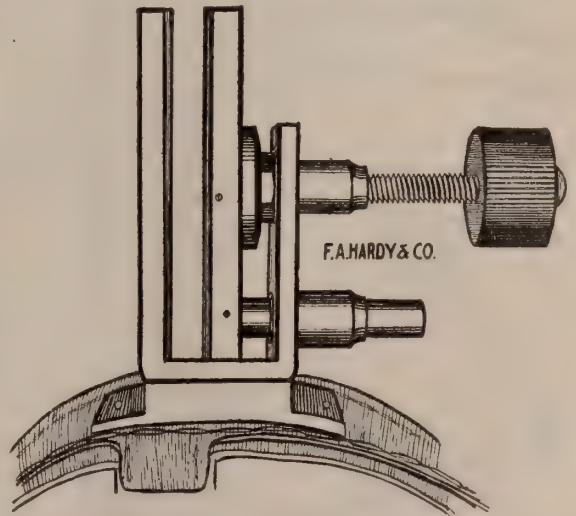


FIG. 2.

Figure 2. The clamp seen from above affixed to the forehead plate of the headstrap and open to receive the tubular applicator stem.

tion. For the nose simple wire applicators are fixed in small clamps attached to a light headband.

The Screens. The small enameled silver tubules described that contain the emanation capillary tubes are placed in two types of containers or "screens." One is of brass and of capsular form, holding but one tubule (Fig. 1 B), the other is of silver and shaped like a suit case opening at one end and holds from two to five tubules as described (Fig. 1 C). The capsular screen is closed by screwing one of its halves into the other half. The silver case screen is closed by an inset cover that fits into its top and is kept from coming off by passing a wire through a hole that is bored through both screen and cover from side to side. (Fig. 1 C.) Both of these screens were designed by Dr. F. E. Simpson and Dr. R. E. Flesher who are associated. For laryngeal use the screens are attached to my tubular applicators (Fig. 3)

whose solid, non-tubular forerunners were described and illustrated by me in the Killian number of the *Archiv für Laryngologie* for 1920. The applicators were made tubular in order to act as suction tubes for the removal of saliva from the throat. They are of 3-16 inch copper tubing bent at the proper laryngeal angle at the distal (laryngeal) end and bent upward

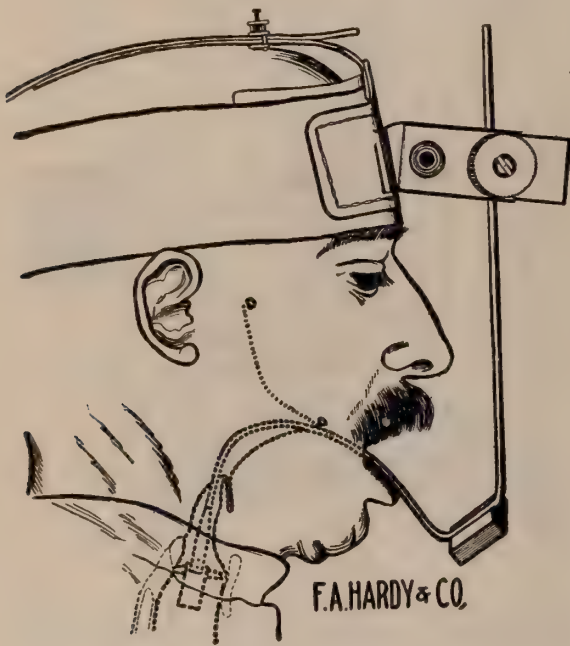


FIG. 3.

Figure 3. The applicator held in the jaws of the clamp with the screen in the glottis as indicated by the heavy dotted lines. A fine dotted line, a.....a upon the cheek indicates the far-reaching influence of emanation in effective doses. Below this line hair of beard ceased to grow though no emanation was applied above the neck.

to supply a vertical shank or stem made to enter the clamp. Attached to the stem of the applicator is a flat thumbpiece for holding the applicator in introducing it. (Fig. 3 A.)

The capsular screens possess an eyelet at one end and are attached to the larygeal end of the applicator tube by a strong copper wire run through the eyelet and bent up in a loop which is soldered in two grooves cut longitudinally on each side of the tube for two inches upward from its laryngeal end. This makes accidental detachment of this type of screen impossible. (Fig. 1 B a—a.)

The case screen is removable and fits into a deep notch cut into a brass attachment that

slips like a sleeve over the laryngeal end of the applicator tube and is soldered to it. The screen is fastened to the applicator by iron wire run through the holes mentioned as perforating in line both the screen and its cover, the wire being also passed through holes, continuous with the screen and cover holes, made through the flanges of the notch. The ends of this wire are then passed through two additional holes (Fig. 1 E a) (Fig. 1 D a—a) at the base of the flanges into the interior of the applicator tube and there, in order to lock the screen firmly to the applicator, twisted through a large hole made for suction of the saliva from the throat. The case screen is the one used most, as it allows multiplication of the source of the radium rays by holding several enameled emanation tubules. The capsular screen is intended for the treatment of small laryngeal growths, for use in the nose, in a narrow glottis and for very irritable throats.

The Clamp. To the inexperienced the clamp (Fig. 2) appears needlessly massive and heavy. Its viselike strength, however, is needed to hold the applicator firmly, as it has a great leverage in the necessarily long jaws of the clamp, this length of jaw being required to permit free forward and back and up and down motions of the applicator tube's stem and, with it, of the screen in the larynx. A short jawed clamp such as was my first pattern, may be made light, but it does not project enough from the forehead, whose backward slant therefore prevents all freedom of vertical and antero-posterior motion of the screen, as the applicator stem is fastened to the forehead by the short clamp.

The clamp is fastened to the forehead by a broad leather headband held firmly to the head by a screw clamp. The forehead plate of the clamp is well cushioned with a layer of sponge rubber supplemented by two soft, dampened flat sponges to keep the pressure upon the plate from making the patient uncomfortable.

Suction Pump. An electric suction pump and vacuum bottle are necessary accessories of the apparatus to keep the throat clear of secretion and so avoid retching and strangling. The pump is connected to the top of the stem of the applicator tube by a rubber tube.

Method of Introduction of the Applicator Into the Larynx. The applicator is passed into the larynx with the aid of a laryngeal mirror, as in

simple swabbing of the larynx. Direct or suspension laryngoscopy are not needed in adults, but are required for the papillomas of children. The pharynx and larynx are anesthetized first by puffing anesthesine powder into them followed by a 5 per cent cocaine spray and finally by rubbing pure flake cocaine into the region to be occupied by the screen, usually the glottis or the fossa piriformis. The clamp is then fastened to the head with the help of an assistant and the applicator is passed into the larynx or pharynx while the assistant guides its stem into the open clamp. When the screen lies exactly where desired the assistant closes the clamp and the screen stays in the selected place (Fig. 3), as for example upon a certain portion of a vocal cord, or in the fossa piriformis, at the base of the tongue and so forth. The duration of a treatment, where 50 millicuries are employed, should not be less than one hour; if 100 millicuries are used, one-half hour; if 200 millicuries, one-quarter of an hour. Most patients endure the presence of the screen in the least tolerant place, the glottis, without interruption for from one-half of an hour to one hour. A complete series of treatments, that is a series with due regard for the amount of reaction that may be created is 400 millicurie hours, that is, four hours with an emanation source of 100 millicurie strength. In malignant disease this series should be followed in from six weeks to two months by a second final one of the same duration unless an extension or relapse of the malignant affection call for further treatment. In my experience one series will suffice to cause all visible evidence of a carcinoma of ordinary size and extent in the pharynx or larynx to disappear by the time two weeks have passed after the last raying of a series, but I have not as yet used emanation upon the very large carcinomas occasionally met with in the throat. For papillomas a series of 150 millicurie hours is enough.

Extent and Time of Reaction After a Standard Series of Treatments. Assuming 100 millicuries of emanation applied for one hour as a standard does in the average person, a reaction will appear in from 2 to 3 weeks after the application. This reaction usually lasts for about 2 weeks and consists of some redness of the mucosa with slight or no swelling. Taking a normal course of four hours of this standard

dose (spoken of as 400 millicurie hours) with weekly treatments of one hour each, the successive reactions will blend, so that there will be a continuous one until from two to three weeks after the last treatment. The mucous membrane endures radium raying better than does the skin so that vesiculation does not occur, but slight epithelial erosions and desquamation may appear and cause dysphagia and some pain. The amount of the reaction varies from usually a scarcely evident amount to, rarely, a good deal of discomfort. In very rare cases a so-called secondary reaction appears unexpectedly a month to several months after the first one is gone. Usually transient, a secondary reaction may be more severe and obstinate than the first. In one case only, in my experience so far, did the reaction amount to a transient burn represented by an ulcer that appeared upon the lingual surface of the epiglottis and healed in a week. An extensive and persistent pharyngitis followed that involved the soft palate principally and caused a keratosis of the covering of the epiglottis with thickening. The emanation in this case was applied mainly in the fossa piriformis and was not in contact with the epiglottis or palate at all. There was no reaction in the fossa piriformis. The burn occurred after a second series of treatments for an extrinsic carcinoma of the larynx that involved the arytenoid region principally. There was scarcely any reaction after the first series.

Pharyngeal Applications. For these an applicator is used without the laryngeal vertical part of the applicator which ends at its horizontal portion.

Nasal Applicators. Here several small clamps are soldered to the forehead plate of a head-band, stout copper wire applicators being fastened in these clamps with set screws after the wires have been bent to hold the screen exactly where wanted in the nasal cavity, or in the nasopharynx after pernasal introduction. In this manner exact applications may be made upon the Eustachian tube or in the ethmoid region, the capsular screens being the ones used.

Description of the clinical results of the emanation treatment outlined here must be left for another paper and longer experience. It is enough to say that the laryngeal carcinomas whose treatment with emanation as described is completed, five in number, and two pharyngeal ones

have disappeared so that inspection shows no trace of them. While optimism is to be avoided it may be stated that apparently this treatment not only arrests the average laryngeal carcinoma, but causes its disappearance with restoration of the normal contours of the affected region unless destroyed by ulceration or cicatrization. Considering therefore what emanation can do if properly applied, laryngectomy or laryngotomy are at present not justifiable until emanation has been used, as it may make them avoidable and lead to disappearance of the malignant growth. Should they be nevertheless needed the method of raying here described will be the best prophylactic against returns that can be used. In nearly all extrinsic and much later intrinsic carcinomas of the larynx that have existed for some time the submaxillary or cervical lymphatic glands become involved in the process, so that external neck treatments over these secondary carcinomas are needed. So far it has been our experience that the process in these glands is arrested by heavy external all night doses, up to 800 millicuries, applied to them, and that in all cases these tumors become smaller, sometimes to practical disappearance, so that they can hardly be felt. Here, too, if the surgical removal of these glands is decided upon, preliminary raying will tend to prevent recurrence. Many of these secondary growths are inoperable, however, and raying the only treatment possible.

Opportunity to open one of these carcinomatous glands that had receded to the size of a pecan without further reduction, showed that it had become a cyst with a fibrous wall with no evidence of carcinoma tissue remaining.

In spite of such encouraging shrinkage of affected glands under emanation, however, the prognosis is very doubtful if the superior carotid and submaxillary triangles already contain good-sized secondary lymphatic tumors, especially where gland coalescence into partly or wholly immovable lumps has occurred. Such massive tumors deep among the neck muscles indicate a widespread concealed invasion of the neck extending far beyond the evident tumors. In relation to such a spread of the disease even doses of emanation considered great at the present day are small in proportion to the immense task offered them. My experience in three cases of these great secondary lymphatic tumors was that after their first check and shrinkage they began

to extend further in the depths of the neck while the inferior triangles of the neck also became invaded. Repetition of the emanation application will create a renewed arrest of the disease but its depth will not be permanently influenced. Nevertheless in some instances where malignancy was not great, Dr. F. E. Simpson has seen complete disappearance of large lymphatic growths. Where as yet small and movable, invaded lymphatic glands may be made to completely disappear under emanation and in all of the cases treated by us prophylactic neck raying is used to clear away possible microscopic carcinomatous lymphatic neck invasions. In these cases it is necessary to use the greatest number of millicuries available at one time, for a given number of millicurie hours applied in a short overwhelming dose will accomplish far more than an equal number given in a small dose extending over a long time. The thick tissues of the neck offer an effective screening against small doses that do not penetrate in sufficient density to affect the deeper parts.

DISCUSSION

(Abstract)

DR. ROBERT SONNENSCHNEIN, Chicago: It is well known, of course, that radium rays have a different effect upon different tissues. The rapidly growing cells are particularly affected, especially those of mesoblastic origin. The small round-celled sarcoma is the most amenable to the action. Particularly resistant to the rays are the squamous epithelial cells. It is for this reason that the carcinoma of the mouth, for instance, has usually yielded so little to the action of the rays. In the larynx we must remember that the epithelium is to a large extent ciliated, except over the true cords, and a small portion of the false cords. These tumors have been largely of the true cords.

When we recall that most authorities give a very unfavorable prognosis in carcinoma of the true cords, we can better appreciate Dr. Freer's paper. He also has shown his good judgment in stating in the paper that one must wait a long time to see whether there will be a recurrence. The temporary results are not the definite ones.

A goodly proportion of the writers and users of radium have employed the radium salts. The half value period of radium is seventeen hundred years; in other words, radium decays but does so slowly. In this breaking down process alpha rays and emanation are emitted. From the emanation are derived the beta and gamma rays. Since the half value period of the emanation is only 3.85 days and it thus breaks down so much more rapidly than radium itself, this may account for the better results obtained with the emanation as compared with the radium salts.

Dr. G. W. Boot, Chicago: The chapter on malignancy

nant disease of the throat and larynx is the most distressing chapter in our whole specialty.

At the County Hospital we have these cases all the time. They all die. We do laryngectomy and they die. We treat them with radium and they die. We do nothing and they die. The only case which recovered was clinically a carcinoma of the left vocal cord. I did a laryngofissure and dissected out the whole cord and the patient is still alive some eight months after the operation with no sign of recurrence. Dr. Freer is to be congratulated if he is able to cure any of these cases.

DR. WILLIAM A. FISHER, Chicago: I asked Dr. Freer if a longer exposure than an hour would be better, and if the use of orthoform would enable the patient to stand a longer treatment.

The paper is especially interesting to me and the result he has shown is certainly astonishing.

DR. J. C. BECK, Chicago: I thought this is one of the most important and valuable contributions to medicine, and certainly to this Section.

He has been using radium pure in salt form, or in the form of needles and applicators, for a number of years. To this day he has had just one case of carcinoma of the larynx that was operated on and treated with radium that shows any sign that it is going to be a permanent cure. Only the other day he removed some tissue from this case and had it microscopically examined for fear there was a secondary growth, two years after the disappearance of the growth.

It requires a large amount of radium to produce enough emanation, and therefore there are so few institutions where emanations are produced. He is glad to know that one can employ such large doses in the vicinity of the growth, rather than be compelled to kill these growths with cross-fire. We have been handicapped by the impossibility of putting into the larynx such large applications and had the patient still able to breathe. A case of carcinoma of the larynx referred to him four months ago had a radium specialist apply radium to the throat rather than submit to an operation. The growth has disappeared on the right side but there is an infiltrate of some kind on the opposite side—probably an edema or irritation.

So far, he has been very much encouraged by the action of the radium. These cases must be watched for three, four or five years to see what the outcome will be.

DR. OTTO T. FREER, Chicago (Closing): Referring to Dr. Sonnenschein's remarks, I have had five extrinsic laryngeal carcinomas and three intrinsic ones since employing the emanation method here described. Previously to that the extrinsic cases were also in the majority.

I regard Dr. Beck's experience, that all of his carcinomas of the larynx treated with radium itself returned, as what was to be expected. I attribute this disappointment to the feeble effect of the necessarily small amounts of radium only that can be used in the

throat because of the bulk of the radium salt used and its container. The powerful raying possible with the more than adequate amounts of emanation always available from an emanation plant with sufficient basic radium figuratively lights up the whole neck with radium rays, so searching out and overwhelming peripheral foci that are not at all or scarcely influenced where radium alone is used, foci which produce the returns Dr. Beck encountered. Dr. Frank E. Simpson has now more than two grammes of radium from which he derives the emanation, so that, no matter what heavy calls are made upon it for especial cases, such as laryngeal cancer, they can be met with adequate doses. Since this source of emanation has become available I feel a confidence in radium raying never felt where radium alone was used even in the efficient needling method, for the needling not only created undesirable sloughs but also did not have a widespread enough influence on the surroundings of the growth treated.

The rather doubting attitude of the profession would soon disappear if the many small collections of radium, useless for effective work and scattered throughout the state, were massed for the gathering of emanation in a common institution properly equipped.

I can assure Dr. Fisher that even in the glottis, in many cases, the emanation screens are continuously held for an hour by my applicators without undue distress to the patient. For intolerant throats in the glottis the screen may have to be taken out every twenty to thirty minutes and replaced after fresh local anesthesia. In the fossa piriformis most patients hold the screen continuously for an hour. The hour long dose, however, I now seldom need, as from one hundred and fifty to two hundred millicuries of emanation are now usually available, making the standard dose of one hundred millicurie hours obtainable in from one-half to three-quarters of an hour.

As to orthoform, I have not tried it as anesthesine proved so satisfactory.

In regard to Dr. Boot's discouraging experience, it is, as I mentioned in replying to Dr. Beck, what is to be expected if surface applications of radium itself are used. He will find that emanation exactly applied in sufficient dose will give him a different result.

The prognosis in emanation treatment by the method described is as follows, according to my experience so far: It is very hopeful in regard to avoidance of a return in cases where there is no gland involvement and the carcinoma is still small or of medium size; less hopeful when there is deep infiltration accompanied by, decided cervical gland involvement with the glands, however, still movable; very doubtful if there is a mass of glands in the neck already deeply fixed; bad, if the neck involvement has paralyzed important nerves, such as the hypoglossal or recurrent laryngeal and where the superclavicular glands are invaded.

MALPRACTICE INSURANCE AND ITS COSTS

ROBERT J. FOLONIE,

Attorney for the Illinois State Medical Society,

CHICAGO

It is a matter of interest to the profession that the handling of malpractice suits by casualty companies has, in most cases, proven a losing venture. Their premiums have in general, been upon the increase and their handling of cases has been very largely unsatisfactory to the profession.

What is said to be a bulletin issued by a casualty company to its agents is quoted in a recent issue of a Medical Journal as follows:

The experience of the casualty companies with physicians' liability insurance has been so disastrous that many of them have discontinued writing this line.

For many years we have been conducting physicians' liability business at a heavy underwriting loss. Our experience during the past ten years has been appalling. Our premium charge was not sufficient to cover even the cost of the preparation and defense of claims. Therefore, remedial measures were imperative. The company must pursue one of two courses with a view to ending the enormous losses we have been sustaining on this business:

First—Discontinue (as the majority of the companies have done) the writing of physicians' liability insurance.

Second—Increase the rates.

Because physicians' liability insurance is essential to the medical profession, we have decided to adopt the latter course and increase the rate.

This form of insurance protects and defends a physician's main assets, his professional reputation, standing and savings.

On and after March 10th the rate for new business in this territory will be \$45 for \$5/15,000 limits.

These new rates will become effective on renewal business beginning with May expirations.

The article is further authority for the statement that the casualty company in question advised that the average cost to it in defending malpractice suits, including cases in which no recovery was had, varied between \$2,000.00 and \$3,000.00 per case. The writer has no specific information as to the identity of the casualty company in question but it would not be a difficult matter to select the company or companies which would perfectly answer to the facts contained in this ante-mortem statement.

In the last seven cases closed during the past

year and handled by the Illinois State Medical Society and which were tried in Court, (excluding from consideration cases dismissed without trial) including cases requiring travel to various parts of the state of Illinois, the cost, altogether in the seven cases mentioned was \$2,929.85, or an average of \$418.55 per case, and this is a much higher cost than the average cost of cases over a longer period of years, owing to the fact that these cases embraced actions requiring large traveling expense and also because of the fact that two of the cases were tried twice, therefore doubling the expense in two of the cases in question. It would be safe to say that the average cost of cases over a period of two or three years would not be much more than half of the figures here given. It is also to be borne in mind that in the list of cases here cited, fees were paid both to the General Counsel and to local attorneys in the cases outside of Chicago.

If the charge of \$45.00, indicated in the bulletin mentioned, is a fair charge in the case of a concern paying \$2,000.00 to \$3,000.00 for the handling of each case, then, if the cases were handled on the economical basis which the Medical Society adopts, the cost would be about one-seventh that of the casualty company's charge and the proportionate premium, therefore, would be \$6.43.

It is not the intention to question the statement that the casualty company in question had its average cost of cases at \$2,000.00 to \$3,000.00 each. In fact, we are inclined to credit the statement as fairly representing the blind manner in which some companies handle these cases. There are a few casualty companies in the field who have done more to encourage malpractice cases than all the ambulance chasing lawyers put together. This they have done by paying amounts in settlement in cases which the writer and others engaged in defending malpractice suits consider money absolutely thrown away. Exorbitant amounts are paid in cases in which nothing at all would be paid by the Medical Society, in which, in fact, no liability exists.

The boast has often been made to the writer by lawyers bringing malpractice cases against one of the casualty company defenders that the lawyer brought his suits in the Summer and purposely held them off so that he might bring as many as possible during the Summer season,

relying upon the casualty company's strong desire to "clean up cases" in the Autumn and early Winter, so as to reduce their insurance reserve with the State Department. In cases where a reserve of \$2,000.00 is had against ten cases, this would put \$20,000 into the reserve fund of the company and if it could release this sum of money by paying \$1,500.00 or \$2,000.00, to dispose of the ten cases, it would help its showing with the Insurance Department. A scramble occurs every Fall and Winter to settle cases which can be closed for a small sum of money. The fact that the liability in the cases is non-existent or negligible is a matter of secondary consideration. In justice to those engaged in this line of business, it is to be said that such handling is not universal among insurance companies or casualty companies in this line of business but there are a few companies who are grave offenders.

An additional reason for the mishandling of these cases by such companies exists in the fact that often the settling and handling of such cases is placed in the hands of an employee to whom it is purely a "side line" and who is engaged principally in the handling of Workmen's Compensation cases. In the latter cases, the employer recovers in every case with no question of liability involved, and the only question involved is the extent of the disability. The casualty loss man with this experience constantly before him is psychologically so affected by the constant payment of money in cases where no negligence at all exists that he readily falls into the way of measuring the value of the case by the disability which exists. One casualty loss man told the writer that he made it an invariable rule to pay \$500.00 in every death case in his charge and, when asked whether this rule was applied to malpractice suits, stated that he did not remember any death cases particularly which fell in that classification but he would be inclined to do the same in that class of cases as in others. The theory was that the damage was an irreparable one, namely, death; that there would probably be a trial whether liability existed or not; that the trial would cost over \$500.00; that, therefore, the thing to do was to settle the case and release a reserve of \$3,000 or \$4,000, or more, and improve the company's statement as to the number of outstanding suits, etc.

The writer has, in the last year, had three cases

in which he represented one of two defendants in malpractice suits, the other defendant being represented by a casualty company. In each of these cases the liability was nothing. In each case, the casualty company made a settlement and settlement was refused on behalf of the joint defendant represented by the Medical Society. In each case, the suit was finally dismissed as to the defendant represented by the Medical Society. So frequently have these situations arisen in past years that lawyers who have any experience in this line, on finding that the Medical Society represents one defendant and a casualty company the other, on definitely ascertaining the fact, in a number of instances, have dismissed the suit as to the defendant represented by us and continued it to the point of securing a settlement against the other. Instead of being an asset, a policy of insurance in a company handling cases in this manner, is a decided liability.

Without any information as to the identity of the particular casualty company mentioned in the quoted bulletin; if the casualty company is correctly quoted by the Medical Journal in question, it has made a great mistake in not following the first of the alternatives suggested by itself, namely, "Discontinue the writing of Physicians' Liability Insurance." It does no favor to the profession to adopt the second alternative, namely, "Increase the rate."

Ordinarily, if a person seeking insurance made inquiry and found that one insuring company charged double, more or less, what others charged for an indemnity contract, he would naturally assume that the one charging the larger price must have advantages for which it charged and would assume that the coverage by the company charging the lesser figure, was less valuable or that its financial responsibility was gravely less, or that some contingency increasing the premium must exist as to the one charging the smaller figure, such as a possible assessment, etc. This rule, which would ordinarily be invoked, is entirely inapplicable to the securing of malpractice insurance. The companies who charge very large fees are either making an exorbitant profit on the business, or they are not handling the cases to the best advantage. The fact that certain insurers handle malpractice indemnity contracts at one-half or one-third that charged by others is owing to the fact that they give skillful and

careful attention to their business and do not settle utterly baseless claims. It is to be hoped that physicians will consult their own interest in taking malpractice insurance and if a real discriminating judgment, on their part, results in driving out of the field some of the casualty companies which have made the pathway of the defenders of the medical profession difficult, it will be a matter of unalloyed joy to those who are seeking to have claims against physicians handled upon the only basis on which they ought ever to be considered, namely, on their merits. They should be settled or defended as liability does or does not exist, without any reference to insurance reserves or reducing the number of suits on the docket and like grounds which, if material to the insurer, go counter to the interests of the assured. A safe question to propound to any solicitor of malpractice insurance is to ask him the cost of defense of suits and if he puts the cost at \$2,000.00 to \$3,000.00 per case, you may rest assured that he is using very poor judgment in underwriting and selecting only hazardous risks, or he has a very deficient loss department which is not handling cases to advantage.

HERNIA OF THE DIAPHRAGM

EDMUND C. ROOS, M. D.

FOREST PARK, ILL.

Diaphragmatic hernia may be either congenital or acquired. According to most authors, the congenital variety is a very rare condition, although the only case of diaphragmatic hernia that I have seen and which is reported in this paper, I have every reason to believe is of congenital origin. The congenital forms are usually due to congenital defects of the diaphragm. The foramina of Morgagni, lying on each side of the diaphragm at the costosternal portion, are congenitally weak areas. The space between the costal and lumbar portions of the diaphragm posteriorly is the last to be closed, and defects often occur here.

An acquired hernia of the diaphragm may be either a true or a false hernia, depending upon the presence or absence of a peritoneal sac. A true hernia of the diaphragm, with its peritoneal covering, pushes forward the overlying parietal pleura, during its growth, and consequently has

two serous layers for its coverings. A false hernia has no sac, and is merely a prolapse of some abdominal viscera through an opening in the diaphragm. These false hernias are always traumatic in origin, as after crushing injuries, stab or gunshot wounds, and in time the hernial contents become covered with a pseudoperitoneal sac. An acquired diaphragmatic hernia may be the result of a diseased diaphragm, as for example, following gumma; or the hernia may occur through the normal hiatuses of the diaphragm which permit the passage of the esophagus, aorta, vena cava, splanchnic nerves, azygos veins, the superior epigastric artery, and the musculophrenic artery.

The stomach, transverse colon and omentum are found most frequently as the contents of a diaphragmatic hernia, which no doubt accounts for the frequency of gastric symptoms in this condition. Various other abdominal organs may, however, be encountered. The hernia occurs almost always on the left side as the right side of the diaphragm is protected more or less by the liver. The size of the hernia varies a great deal, from one so small that it rarely causes symptoms and therefore is unrecognized, to one of such size that it involves most of the diaphragm and fills up a great portion of one side of the thoracic cavity.

The symptoms vary a great deal. Small hernias and many of congenital origin may never give symptoms. When symptoms do occur, they are caused by the interference of the function of and the displacement of the organs involved in or about the hernia, and to adhesions which often form in and around the sac. Embarrassment of respiration, due to pressure of the hernia on the lung, may cause dyspnea and cyanosis, especially when the stomach is full. Displacement of the heart and pericardium to the opposite side may cause palpitation and pain in the chest.

Gastro-intestinal symptoms may be present or absent. Usually in large hernias containing stomach, colon or omentum there is more or less intermittent cramp-like pain in the epigastrium and extending to the chest on the affected side. There may be nausea, vomiting and the belching of a great deal of gas. Portis¹ recently reported a case which presented the clini-

1. Portis, M. M.; Portis, S. A.; Diaphragmatic Hernia Diagnosed During Life. J. A. M. A. 75: 1262 (November 6), 1920.

cal picture found in Hirschsprung's disease. Loss of weight is nearly always present.

The diagnosis of hernia of the diaphragm is usually easily made, unless the hernia is a small one. In extremely large hernias, the affected side may appear larger, but this is rare. Litten's sign may or may not be present. The heart is usually found to be displaced more or less, the displacement depending on the size of the hernia. There is either tympany or dullness present over the lower portion of the chest. The percussion note varies from time to time as the patient changes position, and due to the presence or absence of fluid in the contents of the sac. The breath sounds are greatly diminished or absent over this area. Gurgling sounds and a succession splash may be heard.

The Roentgen-ray establishes the diagnosis without a doubt, and often in otherwise baffling cases, is the only means at hand of making a diagnosis. On fluoroscopic examination the diaphragm is seen to be high on the affected side with various abdominal organs pushed up into this area. The barium meal will usually show the stomach protruding into the thoracic cavity. A barium enema also may be of assistance in demonstrating the condition, as the colon is often found in the hernial sac. An x-ray plate of the chest will show a shadow which is quite distinctive in character, over the lower portion of the lung with the diaphragm on the affected side in an abnormally high position, and with the heart pushed over to the opposite side. In my case it was this shadow which first drew attention to the true condition.

Hernia of the diaphragm must be differentiated from pneumothorax, tumors of the lung, aneurysm, abscess of the lung, subphrenic abscess, diverticulum of the esophagus, and eventration. This is not difficult because of the positive x-ray findings in most of these conditions.

The treatment of a diaphragmatic hernia depends on the severity of the symptoms and upon the size of the hernia. If the symptoms are not marked or the hernia is a small one, palliative medical measures may be tried first. If these fail or the symptoms are severe, surgical repair

of the hernia should be attempted. This is frequently followed by excellent results.

There are two methods of approach, the transpleural and the transperitoneal. The former is perhaps the better method as it admits a better exposure and a freer manipulation of the hernial contents, and it also permits a better closure of the hernial openings. With the present method of producing anesthesia in thoracic surgery, this method is gaining favor.

An incision is made in the proper intercostal space, and exposure obtained with a rib spreader. If this exposure is not sufficient, one or two ribs may be resected, exposing the opening in the diaphragm. In a true hernia the diaphragmatic pleura and peritoneum are divided, while in a false hernia the contents already lie exposed. All adhesions are freed and the contents returned to the abdomen. The redundant portions of the sac are excised and the defect in the diaphragm is sutured, care being taken that each suture grasps pleura, endo-thoracic fascia, diaphragm, diaphragmatic fascia and peritoneum. The lung is expanded fully, and the thoracic opening closed without drainage.

If the transperitoneal route is used, these steps have to be carried out at a great depth and more or less blindly, although a better approach may be obtained by a resection of the costal arch.

REPORT OF CASE.

Mr. S., a farmer, aged 35 years, came to me in June, 1920, complaining of a sharp localized pain just beneath the angle of the left scapula, constipation and loss in weight. The pain had been present for the past two months. It did not radiate and was present most of the time but worse after a full meal. He had always been more or less constipated, but more so in the past few months, so that at the time we saw him he always had to resort to cathartics to obtain a bowel movement. He had lost twenty pounds in weight in the last three months. There was absolutely no history of an injury of any kind, although the patient stated that he often did heavy lifting as part of his work. There was no abdominal or respiratory distress. He had never noticed blood in his stools or were they ever black or tarry looking. There was no cough, nausea or vomiting, and the history was otherwise negative. The past, family and venereal histories were also negative.

Physical examination showed a fairly well nourished and well developed male of about 35 years of age who did not appear acutely ill. The pupils were equal and regular, and reacted to light and accommodation. The reflexes were normal and the nervous

system negative. There was no adenopathy. The teeth and tonsils appeared to be in good condition. There was no enlargement of the thyroid present, nor was there any deformity of the chest. The apex beat was displaced just to the right of the left mid-clavicular line, and the heart dullness extended 3 cm. beyond the right border of the sternum. Litten's sign was absent on the left. The area below the angle of the left scapula and extending around anteriorly to the left border of the heart was tympanitic and the breath sounds were absent. Gurgling sounds could be heard in this area. The heart tones were normal. The pulse rate was 78 and the temperature 98.8. The systolic blood pressure was 116, and the diastolic 80. The liver and spleen were not palpable and the abdomen was otherwise negative. The genital organs and extremities were negative. The urine showed no albumin, sugar, casts or pus cells. The white count was 7800, the red count was 4,800,000, and the hemoglobin 80 per cent. The Wassermann was negative. Ewald test meals and motor meals were negative, and no occult blood was found on examination of the stools.

Fluoroscopic examination of the chest showed the diaphragm extremely high on the left side with the area below it filled with gas containing viscera. The heart was seen pushed to the right. The lungs were negative. A stereo of the chest showed the high position of the diaphragm with the shadows of gas filled viscera in the lower portion of the left chest. The barium meal and enema demonstrated that the entire stomach and the splenic flexure of the transverse colon made up the contents of this hernia into the thoracic cavity. The stomach emptied in normal manner and time, and the duodenal bulb was normal. The roentgen findings of the gall bladder and appendix were negative.

The patient was put on palliative measures and he returned one month after his first visit stating that his pain had disappeared, that he had gained in weight and that his bowels were moving quite regularly without resorting to cathartics.

This case of hernia of the diaphragm is undoubtedly one of congenital origin as there was no history of any personal injury. The absence of symptoms until a recent date can be explained by the fact that the hernia was too small to cause trouble during his 35 years of life. The hernia must suddenly have become enlarged due to a heavy lift or some unusual strain, causing the symptoms he complained of. Whether or not symptomatic treatment of this patient is sufficient without surgical intervention, remains to be seen.

9-10 Forest Park State Bank Building.

THE REMOVAL OF A TOOTH FROM THE NARES.

SOL ROSENBLATT, M. D.

CHICAGO.

The history of this unusual case discloses that W. F. of Chicago, while working for the Illinois Central R. R. Co. about two years ago, was violently struck in the mouth by a lever handle, which had suddenly been released. This accident lacerated the lips and broke several teeth. Within a few weeks after the accident the mouth, including lips and gums, had been nicely healed, whereupon patient was attended by a dentist who attached suitable bridgework so that patient again had normal use of his mouth. The dentist who did the work informs the writer that the patient was seen within two or three days after the accident and no abnormalities of the gums or teeth noted other than that some teeth had been knocked out and were missing and some had been broken off.

Two years after this accident patient was referred to me through the kindness of Dr. G. M. Robinson. Patient complained of difficult breathing through the nose and upon examination the left nares was found to be obstructed. Upon shrinking the mucous membrane with adrenalin and cocaine a white cartilaginous looking object was noticed which proved to be very firm to the touch, and upon working the mucous membrane away from it what might at first have been mistaken for a septal ridge was found to be a tooth. This tooth completely obstructed the left inferior meatus and was firmly imbedded in the floor of the nose, partially covered by the mucous membrane, with the apex of the root lying upward and forward. This is probably the approximate position into which the tooth was forced by the blow from the lever handle acting upon the crown and forcing the pointed apex of the root up through the less dense tissues of the upper jaw. By pushing a narrow dental forceps into the left nares to the limit it was just possible to grasp the tooth, which was then extracted with comparatively little bleeding. Considerable foul-smelling pus was found in the tooth and in the bed where it reposed. The tooth appeared to be a cuspid about 24 mm. long. Immediate relief was felt after the extraction and was followed by an uneventful recovery.

30 N. Michigan Blvd.

THE RELATION OF EYE, EAR, NOSE AND THROAT TO GENERAL MEDICINE*

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Recent years have seen the practice of medicine take on new aspects. There has been a growing tendency on the part of the physician to limit his practice to special fields, which tendency is perfectly rational and should lead to greater efficiency.

The World War has taught us much as a profession as to the importance of a proper preliminary training and preparation by those who would qualify as specialists. The report of General Munson has shown that three out of four of the men, claiming recognition as specialists in the Eye and Ear service of the Medical Corps of U. S. Army, were only superficially prepared for the work. The last year has seen a greatly increased interest in the post-graduate study of medicine in this country—the increased enrollment being as high as 100 per cent. in the leading institutions for that purpose, I am told and it would seem that America is destined soon to be the leader in post-graduate teaching of the world. This is a healthy sign but serious thought should be given the time spent in preparation for the work, and no longer should be held out to the doctor the idea of making him a finished specialist by an attendance of six or eight weeks listening to lectures or viewing operations from an amphitheater.

Let us consider together a few of the diseases that ought to be of mutual interest to both the specialist and general practitioner, and the importance of their co-operating in the relief and cure of the same.

We hear much these days of the economic phases of various questions, one of the most important of which is the human machine, his earning power as to normal, operation of the laws governing compensation for loss of this power, etc.

I need only refer to the importance of conservation of vision of which so much has been said, and the prophylactic measures instituted and laws enacted with a view to the reduction of blindness. Statistics have shown us that ophthalmia neonatorum is responsible for 20 per cent. of the blind-

ness in the United States, greater than any other disease except optic atrophy. The cost of maintaining the forty schools for the blind is \$2,000,000, and the total cost for caring for these unfortunates is estimated at \$7,000,000 per annum. It has been definitely shown that the intelligent enforcement of the Crede method of treatment for this disease would practically eliminate it. We can legislate for the compulsory prophylaxis against ophthalmia, build asylums for the blind, etc., yet it rests with the general practitioner as to whether it shall be wiped out.

Early diagnosis and the institution of proper treatment in eye conditions many times save them. A foreign body, for instance, a simple thing itself, when complicated by the pneumococcus germ may mean ulcer serpens and destruction of the eye in a few days.

Many of you will see early cases of squint. Don't be responsible for the idea that the child will probably outgrow the trouble, or that he is too young for glasses. That patient won't thank you for a useless eye in later life, to say nothing of the social handicap. Remember that the fusion sense is developed very early in life, and ordinarily lost after six or seven years of age if not systematically trained before that time by an intelligent use of atropine. Worth (an authority on squint) says "no child is too young to wear glasses should they be required. Many of my patients," he says, "have worn glasses before twelve months of age." Certainly just as early as is practicable refraction, carefully done under cyclopegic, is imperative.

There is always something pathetic about having to admit to a patient with squint that an operation on his muscles after he has reached adult life is only a cosmetic one, and will not bring back his sight. The patient by that time has usually learned to exclude the less distinct image of the deviating eye, and it has become amblyopic and useless for direct vision.

In the study of ophthalmology it must not be forgotten that there are few general diseases that do not sooner or later affect some part of the visual apparatus, or that do not cause ocular symptoms. On the other hand many abnormal states of the eye (ocular strain, for instance) induce pathological conditions in other parts of the body.

Inasmuch as the eye contains examples of

*Read before the Pana District Medical Association, October, 1920.

almost all the tissues found in the body, alterations of these may present themselves as part of a general process. In other words, the morbid anatomy of the eye is not altogether a study distinct and apart, but is chiefly an application of the principles of general pathology. In emphasizing these truths I wish to insist that the ophthalmologist's neglect to study general medicine is just as culpable as the failure of the general practitioner to recognize the evidences of the more common ocular diseases.

Rheumatism, now recognized as a general manifestation of a focal infection—of which more will be said later—is responsible for a number of diseases of the eye, chief of which are iritis and scleritis. They may accompany, but more often follow after the system has been subjected to the pathogenic germs for months or years. The eye manifestations are more likely to occur with the relapses, although they may constitute the only evidence of a return of the disease. Excluding syphilis, gonorrhea and trauma, an attack of iritis is most certainly rheumatic. The pain is more severe, as a rule, the duration of the disease longer, relapses more common, and loss of sight not infrequent from adhesions and cyclitis.

Besides the purulent infection from gonorrhea we may have iritis which is likely to affect both eyes and be associated with solid deposits in the anterior chamber, and recur with the revival of a gleet discharge from the urethra.

We are all familiar with the early photophobia and injection of the scleral vessels as an early aid to diagnosis of measles. Not infrequently we hear a patient say that the measles settled in his eyes, meaning a persistent conjunctivitis that occasionally remains long after convalescence.

Syphilis manifests itself by corneal infiltration, iridic inflammation, oculo-muscular paresis, or most of all by characteristic fundus changes, any of which are quite as valuable in establishing its presence as are the signs discoverable in any other organ of the body.

Mention may be made of the occasional occurrence of diphtheria of the conjunctiva, usually a sequel of the disease in the throat. A much more frequent sequel of the disease, however, is a paresis of the eye muscles coming on two to four weeks after the illness, and disappearing spon-

taneously in from four to eight weeks—a toxic peripheral neuritis.

It is probably in diseases of the vascular system (blood, blood vessels and heart) and brain structures, that the eye is most intimately associated. Increased blood pressure in either arteries or veins commonly expresses itself in over-filled retinal vessels—a condition readily recognized with the ophthalmoscope. Conversely, diminished blood supply may lead to insufficient nutrition and danger to the optic nerve. It is thus easy to understand why eye symptoms are of especial value in the study and diagnosis of cerebral disease. The retinal arteries being terminal ones the lodgment of a plug in an arteriole is followed by total loss of vision in the area supplied by that vessel, a not infrequent occurrence in cardio-vascular changes. Indeed the changes in the intima or walls of the systemic capillaries can often be detected with greater ease and certainty by the mirror than by any other means, and it occasionally happens that the first indication of these changes is discovered by the ophthalmologist on examining the eye grounds. Surely it is not too much to say that the ophthalmoscope ranks equal in importance with the stethoscope and sphygmometer as a part of our diagnostic armamentarium.

De Schweinitz made the interesting observation a number of years ago, before the study of blood pressures had advanced to anything like its present stage of perfection, that even subconjunctival bleeding (commonly insignificant), if recurrent and particularly in subjects over 40 years of age, should give rise to a suspicion of general vascular disease, and a suitable systematic examination made.

Another good example of the mutual dependence of different portions of the body is found in the relations that exist between the eye and the nervous system. Disturbances of ocular function as well as changes in structure are often only symptoms of disease of brain and spinal cord. We are familiar with the ocular signs of tabes, the so-called Argyll-Robertson pupil, paralysis of one or more of the external muscles, and the progressive grayish atrophy without swelling or hyperemia of the disk, any one of which is surely as important in a diagnostic way as are the lightning pains, the absent knee jerk, or the charac-

teristic gait, to which our attention is so uniformly directed.

Cerebral hyperemia, hemorrhage, embolism and thrombosis present no distinctive signs as a rule, owing to the anastomosis of the circle of Willis and to the fact that the cerebral blood supply does not altogether come from the internal carotid. In abscess of the brain choked disk may appear, but is not so common as in brain tumor, especially cerebellar and if rapidly growing. Intermittent attacks of blindness with regular but temporary contractions of the visual field are early indications of tumor. While choked disk may be found in cerebral hemorrhage, albuminuria and diabetes, it is par excellence a sign of brain tumor, being present in about 70 per cent. of the cases sooner or later, and is usually bilateral.

Apart from the so-called lupus that may attack any part of the eye, tubercle is occasionally found in the iris and choroid. Its value in general diagnosis is weakened by the fact that intra-ocular tubercle is seen only in the last stages of tuberculosis after the disease has shown itself unmistakably in other organs. In this connection, however, mention should be made of the fact that occasionally tuberculosis can be diagnosed by the laryngologist before the disease has advanced sufficiently elsewhere to cause any physical signs. St. Clair Thomson, of London, mentions two cases, in one of which a diagnosis from the laryngeal conditions was made three years before it was confirmed by signs in the chest, and then without bacilli present. A second case cited, a medical man, died from tuberculosis of the larynx without a pulmonary symptom. These cases I refer to briefly only to show the responsibility which the laryngologist may have to bear in diagnosis and prognosis.

Headache, as a symptom of eye or nasal trouble, I shall not go into at length, for to do so would require more time than is at my disposal, except to emphasize its importance to the general practitioner. How often does it tax his diagnostic and remedial resources!

The ocular element, functional or organic, in all forms of headache is larger I suspect than we realize. Casey Wood estimates it at probably 40 per cent., while of all frontal headaches, 75 per cent. are the result of eye strain, in his opinion. The site is invariably bilateral if frontal and due to the eyes, although pain in the occiput is not

uncommon in muscle imbalance. As an obscure cause of headache deviations of and growths from the nasal septum, polypi, mucous and purulent collections in the frontal, ethmoid or maxillary sinus must be thought of. Hence the importance of a systematic examination of the nose in every case where the ophthalmic examination has not explained the cause of the headache. That impaired nutrition and defective elimination can cause headache all of you can testify. It goes without saying then, the visual act being essentially a muscular one, anything that lowers the general body tone also weakens the ciliary and extrinsic muscles of the eye. Hence the importance of tonics, regulation of diet, and due attention to all measures tending to correct digestive vices in the treatment of muscular asthenopia, or eye strain.

I ask your indulgence in referring to focal infections as a part, a most important part of any discussion of the relation of the nose and throat to general medicine. Notwithstanding much has been said on this subject there certainly remains much to be said. Systemic or general disease due to local infection is a conception as old as medical knowledge. But during the last decade a new interest has been aroused in the subject through the excellent work of Billings and Rose now, in their study of bacteriology, modes of infection, and co-operation in laboratory and clinical research.

In their work they have shown by animal experiments the specific elective tissue affinity of certain strains of pathogenic organisms. In their book on focal infections they state that the primary focus of acute rheumatic fever (endocarditis, chorea, glomerulo-nephritis, peptic ulcer, appendicitis, and chronic deforming arthritis as examples), is usually located in the head and most often in the form of alveolar abscess, acute or chronic tonsillitis, or sinusitis. They further state that the removal of persistent overgrowth of lymphoid, a good culture medium, in the nasopharynx and throat, should be advised. Chronic enlarged pharyngeal tonsils which obstruct the respiratory tract and prevent proper ventilation and drainage, invite local infections of the mucous tracts of the head and should be removed.

Too often the small faucial tonsil which may look innocent to the untrained eye, or be devoid of discomfort to the patient—the so-called im-

bedded tonsil—has a smooth covering of mucous membrane which seals over infected crypts or actual abscess. It is in this way that the stumps of tonsils, left as a result of an imperfect operation, may contain infected crypts sealed in by the operative scar, thus making the last state of that tonsil worse than the first in its power for harm.

It is not my wish to seem to look with favor on unnecessary operations, as many operations of all kinds are irrationally performed, and probably tonsillectomy is often needlessly done for the relief of a systemic infection the real cause of which is situated somewhere else in the body. Probably the faucial tonsil has a beneficent function, and uninfected should not be removed, but as mentioned before, too often they are culture mediums for pathogenic bacteria, and as such are a constant source of danger through the lymph and blood streams to the body tissue. Infected tonsils cannot be successfully sterilized by any known method and should come out.

The work of the various advisory boards in the World War taught us many things in medicine, notwithstanding the tests were not rigid ones as regards the eye and ear. The chronic discharging ear and its importance were well shown. In the adolescent period of life among those ordinarily eligible for military service the medical advisory board of New York Eye and Ear Infirmary had referred to them 357 cases, 187 of which were refused active service because of chronic suppurative otitis media. Those having perforated drums, perfectly dry at the time of the examination, were classified in the limited service class.

It has been shown that this latter group were especially susceptible to gas, the gas coming in contact with the middle ear often causing an acute exacerbation. In others the gas passed through the eustachian tube into the pharynx with ill effects. For years the insurance companies of the country have been refusing patients with a chronic suppurative ear, as a risk, except in the few instances where the radical mastoid operation had been performed. The army and navy have long recognized the dangers of a chronic otorrhea and do not accept them.

We have heard much of the conservation of vision in the past; let us hear more regarding the conservation of hearing. We all realize how utterly miserable are these poor unfortunates.

Positions of responsibility in the commercial world are closed to them, and even those who are moderately deaf are, as a rule, not wanted.

As a means of prevention of these chronic processes, I appeal for a more intelligent management of the acute conditions of the ear, and the causes that give rise to them. Mention has already been made of focal infections and poor drainage of the naso-pharynx as a cause of eustachian tube congestion and middle ear infections. Those of you who have seen service in the baby wards of a large hospital have been impressed with the constancy of the conditions just mentioned, in the little patients with a mastoiditis and probably a subperiosteal abscess. Such patients invariably make tedious recoveries unless the source of the trouble is removed by cleaning out the post-nasal space.

Two predisposing causes are mentioned by Kerrison that make children particularly liable to catarrhal inflammation of the eustachian tube, and infection of the middle ear: 1. The greater prevalence of adenoids, and 2, certain anatomical characteristics of the eustachian canal in infancy and childhood.

The tube of the infant and young child is relatively wider and more horizontal, the pharyngeal opening of which is below the floor of the nose—almost an inch lower than that of the adult—making it particularly favorable to the entrance of germs from the nasal secretions draining into the pharynx posteriorly. In the adult the most common causes perpetuating a tubal congestion and thus making possible at any time from a simple cold in the head, an acute middle ear infection, may be mentioned, deviations of the nasal septum, cystic turbinates, etc., interfering with normal respiration, and which call for careful surgical correction.

Of the acute exanthemata, scarlet fever, diphtheria and measles are the ones that give rise to tympanic diseases more often even than is generally recognized by the medical profession. Of these measles and scarlet fever most often go on to mastoid suppuration or become chronic purulent ears. Most of these cases show a temperature, as a rule, but Kerrison makes the interesting observation that he has seen a number of cases in his service at the Willard Parker Hospital for Acute Infectious Diseases, of acute middle ears with a bulging drum, with a normal or

only slightly elevated temperature. So experienced an observer as Kerley has stated as his belief that young children do not as a rule experience earache with acute middle ear inflammation. Obviously such subjective symptoms as tinnitus and moderate impairment of hearing are often quite indeterminable in young children.

Many of us can attest to having attended a child in which the cause of the fever was obscure—a not infrequent occurrence in children—and be met on the second or third visit with the information that “the baby’s ear is running.” While this may be getting out of an embarrassing situation, it is open to the serious objection that the opening in the drum may be either too small or poorly situated for the purpose nature intended it, viz., drainage. Besides are we not taught the importance of early incision and drainage in suppurative conditions in other parts of the body?

That the routine practice of examining the ears of all sick children, by a man trained in the interpretation of what he sees in the ear, would not only save much unnecessary suffering and some loss of life, but prevent many complications such as chronic otitis media, mastoiditis, infective sinus thrombosis, and brain abscess, I am firmly convinced. Not the least of these is chronic purulent otitis media, the end results of which no man can forecast.

Recently I saw a patient, three years of age, with an acute middle ear, with sagging posterior-superior canal wall. The little patient looked ill but had given a little evidence of the ear as the cause of the trouble. A myringotomy was done, and the interesting thing about this case was that the pus literally spurted out over the knife when the incision was made, showing the pressure it was under. Now, with a condition such as this I am convinced that only a few hours of neglect may determine the question of having to do a mastoid.

Just a word here about the incision for an otitis media, and its importance—a myringotomy we call it. I do not use the term paracentesis because the word means a puncture, and I think there is more to it than merely that. The operation should always be done under a good light and with a clear field. It’s all right for you to do it if you really know how, with a full realization of its importance, and that it is not altogether free from danger. Joe Beck goes so

far as to say that it is an operation as important as a laryngotomy even. Be that as it may, upon that incision whether it is made clean and correctly, will determine largely the future of the case.

Regarding the chronic conditions, many may be made better by the advice and treatment of the intelligent physician and otologist. The advice that “he will outgrow it” is again irrelevant and is simply a case of “passing the buck” to the poor patient, who does not realize his danger. We are all familiar with the dangers of a pus cavity in the appendix, tonsil or tooth, and the importance of its removal. Surely a focus of pus adjacent to the brain, lateral sinus, or facial nerve is even a greater source for harm. Besides the mortality from complications is high, averaging all the way from 50 per cent. in sinus thrombosis to 75 per cent. in brain abscess; the only cases of otitic meningitis reported as recovering have been those of a serious type where no micro-organism was found in the cerebro-spinal fluid.

In conclusion I wish to make brief reference to the symptom of vertigo and its relation to the internal ear. Although it has been generally recognized for many years that vertigo may result from ear disturbances, the idea that all vertigo from whatsoever cause, is peculiarly an ear study is relatively a recent one. In the past we have been accustomed to regard the symptom as something quite mysterious and beyond the reach of medical aid. We have heard in a vague and indefinite way of intestinal, or stomach vertigo, dizzy spells from the liver, indigestion or neurasthenia, without thinking much of the mechanism of its production. In the light of the new ear tests, however, vertigo should be regarded as a distinct clinical entity, deserving of just as careful analysis as fever or any other symptom.

Vertigo may be defined as a subjective sensation of a disturbed relationship of one’s body to surrounding objects. That this disturbance is perceived within a definite part of the brain, just as sight and hearing are perceived within the brain, is now well established. The stomach or liver or kidney can no more produce vertigo than they could produce flashes of light, disturbances of smell, or unusual sounds. It is a generally accepted fact as a matter of course that the perception of light and sound and the sensation of smell are produced by the irritation within the

brain of the apparatus for sight, hearing or smell as the case may be. While headache may be caused by constipation, or gastro-intestinal disturbances, it is in the head nevertheless. In just the same way if a disturbance of any organ of the body is accompanied by vertigo, it is due to irritation of the vestibular branch of the eighth nerve or its intracranial distribution, and is essentially an ear study.

For instance, as an illustration (one with which we formerly were more familiar than now), the mere taking of alcohol into the stomach does not produce vertigo, staggering gait, etc., but when the alcohol reaches the vestibular apparatus by way of the blood stream, then these symptoms of disturbed equilibrium appear.

I would not have you understand that vertigo can be caused only by a disturbance within the ear itself, but that various disorders in the body may manifest vertigo as a symptom, and the essential fact to keep in mind is that when it does exist it is the direct action on the internal ears or their pathways to the brain, that is responsible for the vertigo.

In the light of recent subjective tests, the so-called rotation or caloric tests, many conditions in the rounds of the physician's daily experience are certainly destined to attain a new significance.

551 Standard Life Bldg.

DEFECTIVE MENTAL DEVELOPMENT WITH SPECIAL REFERENCE TO CASES SHOWING DELIN- QUENT TENDENCIES*

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In discussing this class of individuals, I wish to review briefly the various types of defectives. These individuals are sub-normal because of the lack of proper development of their mental faculties. This failure to develop may be due to hereditary influences, such as the offspring of other defective insane persons or to disease of father or mother prior to the birth of the child, or may be due to acquired disease of the child after birth. In some instances it is impossible to determine any cause either hereditary or ac-

quired. The mere fact that the child has had meningitis is no proof that the failure to develop is due to meningitis.

I don't wish to take up your time to go into details of the physical stigmata of degeneracy, neither shall I discuss the various types of defectives based on physical defects or phenomena of development such as the Mongolian idiot.

Besides the backward child there are three classes of defectives based on the degree of mental development, namely the idiot, the imbecile and the moron. The idiot never develops to a mental age above two years, the imbecile from two to seven, the moron from seven to twelve and the backward child from twelve to fifteen. The idiot nearly always shows marked physical defects of development, the imbecile a less degree, and the higher types still less, while some may show little or no defects. The ability of defectives to maintain themselves depends largely upon their mental reactions and not entirely upon training and mental age development. It is quite obvious that the lowest grades of development, the idiot and the imbecile, will have to be cared for all their lives either by relatives or the public. Further statements will refer to the higher grades of defectives. The imbecile who grades well up the scale may be able to contribute to his support if trained to do some kind of work; the moron may contribute or even be self-supporting, especially if trained early and supervised during adult life; the backward child should always contribute to his support and many will be self-supporting if properly trained without later supervision. Even the higher imbeciles may be able to more than maintain themselves if supervised and suitable occupations obtained for them. The defective who responds well to training usually will be a detriment to the public if not properly trained and supervised. They readily form bad habits, especially idleness and carelessness in doing tasks assigned to them. Mentally reactions of defectives are quite different but as a rule they are very easily influenced by environment. Often they will take things belonging to parents or other children and later steal various articles, while if properly trained they may be taught to be honest. This is not true of a large number of them. I now refer to those who show marked delinquent tendencies and seem to inherit a mental makeup such that they cannot be trained to

*Synopsis of an address given before the Macon County Medical Society, Sept. 15, 1920.

respect the rights of others or to work to any advantage. It is this class of individuals who need special attention, isolation from other children and early institutional care at public expense, as they soon become a source of trouble at home, in their special classes in school and at large in the community. Closely associated with this group of defectives is the child with marked delinquent tendencies that does not grade feeble-minded. These children will take up with others of a low mental development and put them up to do various misdeeds or assist them in committing offenses against the law. However, many who appear bright and are not considered defective by the public or the teacher will grade feeble-minded. Besides the delinquencies above mentioned, defectives show marked abnormal sexual tendencies. Some, the higher grade, may be taught to live a moral life but are always weak and easily influenced; others will become very delinquent in this respect and must be restrained by institutional care.

The most important in all diseases and defects of the human race is the remedy. As no cure can be effected what is the next best thing for the defective? We must prepare for training and supervision for all and institutional care for a large per cent. of them. What is the physician's duty when he is called to treat a feeble-minded child? Does he fulfill his duty when he recognizes that he is dealing with a feeble-minded child and merely prescribes for its immediate physical illness? The first question I will leave for you to answer. The second question, I will answer in the negative. At least the parent should be advised or warned of the future possibilities of the child. I wish here to emphasize the necessity of the physicians early instructing the parents of the delinquent tendencies of defective children and giving special precaution for protection of feeble-minded girls.

I believe the medical society of every country whatever the population should co-operate with the school boards, social and charity organizations, and legal authorities, in the problem of caring for these defective and delinquent individuals. I am glad to know that this city has a department in the public schools for the training of these unfortunates with specially qualified instructors, a welfare home and other charitable institutions. I do not know to what extent they

are prepared to meet the demands in caring for these children, neither do I know to what extent this medical society is co-operating with other public welfare organizations in this health problem. Your co-operation is necessary for the best results in any public health problem. This is certainly a public health problem as well as a problem of the public welfare of the community, state and nation. It would be interesting but time does not permit me to relate some of the difficulties encountered with defectives drafted into the United States Army during the World War. I cannot at this time give you details of what I believe should be done, but I believe that the various organizations of the city should be united sufficiently so that all feeble-minded children would be properly cared for and individual records kept and every child who cannot be properly supervised at home or by a responsible party should be cared for at public expense. It is evident that proper care of defectives will cost the public large sums of money, but it is quite as evident to me that the defective, left untrained and not supervised, will cost the public many times as much to care for them at public expense. Sometimes parents object to having defective children away from home. I refer to delinquent defectives whose parents cannot properly care for them and it is evident they are not being supervised. The parents should be convinced that the children will be better off in the institution than with the care they will be able to give them at home.

In conclusion I wish to refer to a short outline read before the Jacksonville Medical Club just before opening a Community Clinic in that city, March 6, 1920. Since that time clinics have been started in Quincy, Springfield, and this city. A physician from the Jacksonville State Hospital is sent to conduct these clinics, the same being authorized and their expenses paid through the Department of Public Welfare of the State of Illinois. I conducted the clinic here Wednesday, September 8, and there will be one held every three weeks. At these clinics children may be referred for examination and recommendation. It is necessary at the beginning to obtain a history of the case as complete as possible, showing the hereditary and other influences, the family history, etc., and to save time this information should be tabulated before the clinic session by

the social worker. Where a Binet Mental Age Test has been made, the same should be submitted because it is unnecessary to repeat these tests especially where the Binet Test has been made recently. If these suggestions are carried out we will have time to do more efficient work at the clinic than otherwise. However we are willing to do all that can be done. Quite often it is necessary to have cases returned at the next clinic. Some cases will need to return several times to be studied before we can properly classify and recommend treatment or care.

Suspected cases of insanity are examined at the clinic and if decided that they are insane, instructions will be given for home care or if indicated a recommendation will be made requesting that a petition be filed for their commitment to an institution for the insane. A full report of the examination and history will be submitted for the information of the commission or jury trying the case.

Patients on parole from the institution are requested to report regularly at these clinics so that they can be observed and the one who has charge of them instructed in their care, and at the expiration of their parole the physician will be able to make the proper recommendation to the managing officer of the hospital as to how they should be discharged.

HEADACHES OF OCULAR ORIGIN.*

WILLIAM H. WILDER, M. D.

CHICAGO

Only within comparatively recent times has the medical profession come to know that headaches are frequently of ocular origin, and this knowledge is not yet as widely disseminated as it should be. Ophthalmologists had long known that errors of refraction would cause strain and aching of the eyes and even cerebral discomfort, but it was Weir Mitchell who first brought prominently to the attention of the profession the fact that such eye strain would explain the etiology of headaches whose cause was otherwise obscure. Mitchell also pointed out that in such instances the brain symptom is often the only prominent symptom of the eye trouble, so that there may be no ocular pain, but the strain of the eye muscles is expressed solely in frontal or occipital head-

ache. He also observed "that eye troubles may be the unsuspected cause of insomnia, vertigo and nausea and that in many cases eye trouble becomes suddenly injurious, owing to breakdown in the general health or to increased sensitiveness of the brain from mental or moral causes."

Medical writers of a generation or more ago in attempting to classify the varieties of headaches, frequently confused those that would be recognized nowadays as caused by eye strain or nasal or sinus disease with migraine or its modified forms. Headaches of ocular origin like those of nasal or sinus origin should properly be classified as symptomatic or sympathetic and we are indebted to Weir Mitchell for emphasizing the fact of the relationship of eye strain to such forms of headache and thus pointing the way to the relief of much suffering.

Sufferers of headaches of this variety are very numerous, and are seriously handicapped in their work until they are relieved. It would be difficult to estimate the relative frequency of headaches of different varieties, but I am inclined to think that ophthalmologists would be agreed that the majority of all headaches from which mankind suffers would be found to be of ocular origin. Certainly a large majority (possibly 75 per cent) of bilateral frontal headaches are caused by eye strain.

How then can eye strain bring about the symptom of headache? Why is it that one person will suffer headache from eye strain and another straining his eyes much more, as the examination shows, will have no trace of such a symptom? The answer to these questions is included in the answer to the more general questions: "What is headache?" "Why is headache?" and "What changes take place in the nervous structures when headache develops?" So far as I know, no definitely satisfactory answers to these questions have ever been given.

Some of the hypotheses advanced for the explanation of migraine may be applicable also to headache of ocular origin. A vaso motor spasm occasioned reflexly, followed by vaso motor dilation may lead to hyperemia of the cerebral circulation and irritation of the nervous tissue. Some toxic influence operating through the circulation or a reflex acting through the sympathetic and sensory nerves may irritate the brain cortex. Spitzner (Über Migraine) advances the hypothe-

*Read at the joint meeting of the Chicago Neurological Society and the Chicago Medical Society, Feb. 16, 1921.

sis for migraine that there is a relative stenosis of the foramen of Monro. An active or passive hyperemia of the brain, however caused, would then result in a hyperemia of the choroid plexus with an increased pressure in one or both ventricles. Recently Dunn (Archives of Ophthalmology, March, 1918,) has advanced the theory that "headaches, inclusive of those due to injury and to tumors, are a manifestation of increased intracranial tension." This is controlled by the secretion from the posterior lobe of the hypophysis which promotes the permeability of the brain fluids. He maintains that the disturbance of the pressure exerted upon the ganglion cells of the retina because of the over-exertion of the ciliary muscle (with consequent increase of intra-ocular fluid) causes reflexly a disturbance of the secreting activities of the posterior lobe of the hypophysis. If this continues long enough, reflex temporary exhaustion of the posterior lobe activities sets in and with it higher than normal intracranial pressure, the clinical symptom of which is headache.

Whatever the ultimate cause may be there is abundant proof that excessive use of the eyes for near work will, in certain individuals, excite headache. Why others, having such a refractive condition of the eyes as to make excessive efforts of the muscles necessary for good vision, escape headaches and even other evidences of eye strain is not known. We must fall back on the assertion that they are not so susceptible to fatigue, have more endurance, etc., and that it is in a certain nervous type of persons that such manifestations will appear.

Greater demands are made upon nervous energies and upon the eyes by our so-called advancing civilization than obtained among simpler races or peoples. The eyes are being used every minute of the waking hours, the intrinsic and extrinsic muscles are in constant action, changing the focus and directing the gaze along various lines or concentrating it on the work near at hand. Is it any wonder that in a crowded city with multifarious duties and causes for excitement a nervous individual should have eye strain and eye ache with possibly headache?

Eye strain is in most cases *eye muscle* strain. Consider for a moment the requirements for clear binocular single vision. Each muscle of a team of six for each eye must work harmoniously with

all the rest to direct the gaze upon the object to be seen. The ciliary muscle must act promptly to so change the crystalline lens that the image will be accurately focused on the retina. If the condition of emmetropia (normal refraction) exists no effort will be made by the ciliary muscle for seeing objects at a distance of twenty feet or more. The nearer the object is within twenty feet, the more strongly must this muscle act to accommodate the eye for the given distance. If an error of refraction exists, particularly hyperopia, the ciliary muscle will have to be exerted even to see clearly objects at a distance and correspondingly more for near points. The difficulty is still further increased if astigmatism is associated with the refractive error, for then the muscle must act unequally to overcome the astigmatic curve of the cornea. This excessive and unequal action of the muscle results in eye strain and fatigue. It is as if a person had to be on his feet all day with one shoe raised slightly more than the other so as to give the spinal column a lateral curve, or as if he had to compensate for a weight carried on one shoulder for a long time; the result in such a case would be fatigue and backache, if not worse.

As to the part of the head affected by ocular headaches, we may say that more frequently it is frontal or supraorbital than deep orbital, fronto-occipital and temporal. It is almost always bilateral, but I cannot agree with some writers who maintain it is invariably so. While one-sided headaches, hemicrania, are usually characteristic of migraine, there are exceptions to this rule, and they may be influenced if not excited by eye strain. Eye ache or dull pain back of the eyes may be a precursor of severer headache in persons subject to headache.

Ocular headaches usually occur with or following the continued use of the eyes for near work that requires accommodating and convergence, such as reading, writing, sewing, card playing, drawing, painting, etc. When so occurring the relation of cause and effect is usually readily recognized by the patient or the physician. In other cases the headache may not come on at the time of using the eyes, but will be noticed in the morning on waking.

The strain incident to using the eyes intently even for distant vision, combined with the expenditure of considerable nervous energy is enough

to excite an attack. This is illustrated in many persons with hyperopia, astigmatism or heterophoria, sometimes if wearing correcting glasses, who will have eye ache and headache after shopping, sight seeing, visiting picture galleries, theatres, church, etc., although not using the eyes at such times for any continuous near vision. Riding in trains or cars and watching the rapidly changing scenes will in some people excite a headache even if there is no refractive error or if it is corrected. Similarly, reading on trains is trying to the eyes because the focus must be frequently changed and the extrinsic muscles are strained to keep up with the oscillations of the page that is being read.

Again faulty lighting in living rooms, offices, work shops, stores and places where people do near work is responsible for a great deal of eye strain and will excite headache in those predisposed to it. On the other hand, *too much light* may be injurious to the eyes, and the glare from a bright road or the dazzling light reflected from the water or light shining directly in the face when engaged in reading or near work will frequently aggravate eye strain or in nervous persons induce headache. Persons suffering from an illness that confines them to bed or who are convalescent from illness should be protected from bright lights by proper shading. Too frequently this simple precaution is sadly neglected even in our best hospitals and the unfortunate patient must gaze at a glaring white ceiling or have the light from a chandelier or wall fixture thrown directly into his eyes. Convalescents from illness find time hanging heavily and read, write or engage in some diversion that requires near vision. They do not realize, and too often their physician does not explain to them, that their eye muscles of accommodation and convergence may have been weakened by the disease as well as other muscles. And they tire and strain their eyes and sometimes have headaches and marvel that they cannot read as they used to do, even with their glasses. As well might they expect to get out of bed and take a long walk without fatigue. And yet the convalescent needs recreation and diversion. A nurse could add much to her accomplishments by learning to read aloud pleasantly and entertainingly.

The oculist is often asked if reading in bed is

injurious to the eyes. The answer must be that it is not if the patient is strong enough to do it and if he is comfortably propped up in bed so that the book will be held properly in front of him as if he were in a chair, and if the page is well illuminated by a light from the back or side that does not shine in his eyes. But if he reads when lying down or in a constrained position the eyes will become tired because of the unusual strain on the eye muscles from his attitude to the page he is reading.

There is a variety of ocular headache in which there is little or no refractive error present in the eyes, and the balance of the extrinsic muscles seems to be normal or so nearly normal as to be negligible. And yet the unfortunate sufferers of this form of headache cannot use their eyes for near work for any length of time without distress and if they persist in attempting to do so are tormented. They are the despair of the physician, the oculist, themselves and their friends and wander here and there seeking relief. It seems as if they have acquired the headache habit and it cannot be broken. They are frequently neurasthenics, some of their attacks may be slightly migrainous in character.

Migraine. True migraine, even the classical variety in which the ophthalmic features of scintillating scotoma are present together with hemiparesis, is in my opinion never of ocular origin. In many of these cases there is no evidence of eye strain, although in others there may be refractive errors or muscle imbalance. In general, the same may be said of the modified or abortive migrainous headaches in which the classical signs are either absent or modified, but enough of the characteristic symptoms are present to stamp them of this variety. Of these cases the ophthalmologist naturally sees a great number, and too often he finds that he can give them no relief, for there may be no abnormal ocular condition present. However, in some of them there are errors of refraction or heterophoria or retinal hyperesthesia that must be reckoned with and treated properly, for by so doing the attacks of headache may be mitigated even if not relieved, and the patient made more comfortable. It is the relief that has been obtained in some cases of this kind, from the added strain of the eyes superimposed upon the migrainous character of

the ailment, that has caused some ophthalmologists to conclude that migraine is of ocular origin, but this is not the opinion of many. It is best, therefore, in every case of migraine or migrainous headache to make sure that there is no condition of eye strain that would help to aggravate the attacks.

In this connection it is well to remember that there may be some relation between migraine or the migrainous condition, and hypertension of the eyeball. In incipient glaucoma in which only at times will there be increased intraocular tension, there may be ill defined pains or aches on one or both sides of the head, that might hastily be considered migrainous. It is necessary for the physician to differentiate such symptoms carefully; if he would correctly evaluate their significance.

Headaches from Eye Diseases. Inflammation of the iris and other portions of the uveal tract, sometimes not readily ascertained, may be the cause of headache. Congestion of the choroid that is present in advancing myopia in young life may be responsible not only for deep seated orbital pain, but also headache. Acute diseases of the eye that excite headache will be more easily recognized.

Treatment. The principles of treatment for headaches of ocular origin have been suggested in considering the various phases of the condition. The eye strain must be relieved by proper correction of any refractive errors or muscular anomalies that exist, and the patient must wear suitable lenses to accomplish this. In order to find the lenses that are suitable it is very essential that the examination be made when the eyes are thoroughly under the influence of a cycloplegic. The muscle of accommodation must be paralyzed. Any test without this may be incomplete and misleading. Atropin is not always necessary, except for very young subjects; complete cycloplegia can be obtained in most instances with drugs such as scopolamin or homatropin, whose effects are of shorter duration, and therefore do not cause such a hardship for the patient. In cases where sensitiveness to light is a factor, the necessary lenses may be ground in glass of various tints to shield the eye from an abundance of light or to modify it by excluding certain of its more injurious rays such as those of the purple end of the spectrum. The patient

must be instructed in the subject of the use of his eyes, kind of illumination, amount of reading, etc.

CONCLUSION

In conclusion we may say that headache, particularly that in the orbital, frontal and fronto-occipital regions, is often the expression of fatigue of the eye muscles, intrinsic and extrinsic, more frequently the former. Some individuals suffer fatigue more easily than others and some are more prone to nervous manifestations than others and may develop headache. In just what manner the headache is brought about by the fatigue of the eye muscles has not yet been determined. Wearing suitable lenses, either constantly or at times for near work, will relieve the strain of the eye muscles and so prevent fatigue and headaches which are ocular in origin.

PALLIATIVE TREATMENT OF HEMORRHOIDS.*

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CHICAGO.

A part of any comprehensive treatment is a recital of the means of prevention not only to avoid the first attack but to prevent recurrences, and also a consideration of the predisposing causes of hemorrhoids with suggestions to inhibit their development. The individual's habits, environments and vocation must be carefully investigated.

In children constipation must be continually anticipated and a gentle dilation of the sphincter or a glycerin or soap suppository is often superior to the administration of laxatives. As the child grows up the over-use of sugar or pickles or of over-eating in general must be guarded against. In adult life alcohol and tobacco should be discontinued, as also prolonged sitting at stool, great muscular strain and excessive venery. Carbohydrate foods are to be reduced, vegetables and meats continued or increased if need be, and highly seasoned foods interdicted. Constipation in the adult requires constant attention. Active, irritating, resinous cathartics must be avoided. Cold enemas at regular periods, if properly given, are very effective. If laxatives are given I have had the best results with cascara or rhubarb with malt. If the rectum is dry and fecal masses

hard I have found injections of a few ounces of sweet oil, liquid vaseline or occasionally glycerin of much benefit.

From what has been said of the etiology and symptomology of hemorrhoids, it is evident that when hemorrhoids have developed their treatment varies with each case.

Hemorrhoids that are amenable to treatment occur under very different conditions and in all classes of patients. There are many methods most of which are good in selected cases and your treatment is half done when you select your case, determine its proper treatment and know what results to expect.

Palliative Treatment. Hemorrhoids may be relieved by palliating where surgical treatment cannot be instituted either because of the patient's refusal, some jeopardizing systemic condition or in aged or delicate individuals. In all of these conditions, unless there is excessive bleeding or strangulation, it is better not to operate but to use local tentative measures, as there is always danger of embolism hypostatic pneumonia or phlebitis after operation on such individuals.

If the hemorrhoids are inflamed and prolapsed they must first be reduced. The patient should be sent to bed. An upturned chair is placed in a slanting position on the bed and the patient on his knees reclined against the chair. This places him in an extreme oblique position, a posture between the Sims and the knee chest.

Next paint the hemorrhoidal mass with 4 per cent. cocaine in 1:1000 adrenalin solution and wait twenty minutes, because the circulation in this edematous and strangulated mass is slow, and the drugs are not rapidly absorbed. Gravity depletes the tissues, and the patient's position with the thighs flexed relaxes the pelvic muscles so that the protrusion will either reduce of its own accord or may be easily replaced. Of course, all of it does not belong within. Probably about one-half does, and a lateral sulcus running parallel with the median raphe will usually be found. Internal to this line is mucosa and external to it is the skin. This should be remembered, because if the whole mass is placed within the rectum the patient will be just as uncomfortable as he was before. That part external to the sulcus is edematous external tissue and some-

times it may be necessary to incise this to deplete it quickly.

After the hemorrhoids have been properly replaced the whole anal region should be well covered with astringent ointment then covered with gauze compress, and the patient let down on his bed stretched out prone. The pad and buttock are now strapped down with adhesive plaster bandage. If the hemorrhoids are inflamed but not strangulated they should have a warm, slightly antiseptic bath, followed by a cold douche and then the ointment applied. The patient should lie on his face as long as he can. He then may turn on his side with the hips elevated on a pillow or two. Keep the hips up and do not let him lie on his back. This is important because it will arrest inflammation, hasten resolution and relieve pain more effectively than any other remedy. The next day put the patient on his side with his knees well flexed, dilate the sphincter gradually and massage the hemorrhoidal field. Irrigate the rectum and anal canal with sterile water and swab the piles with 1:1000 adrenalin solution and apply the ointment on the outside. If there is much mucous discharge it will be well to inject one-half ounce of aqueous fluid extract of krameria at night.

An important factor in the protection against recurrent attacks is the arrest of hemorrhage and the prevention of prolapse. The bowels must be kept open each day and it is a study with each patient to find something laxative but not exhausting. Sulphur is gentle in its action, produces a soft, mushy stool, which easily slips by obstructions and allays inflammation by its presence in the stools. Castor oil produces a soft stool, does not create gas and leaves the abdomen flaccid. In many cases I have found cold water enemas more effective than cathartics. It is a good plan to have the evacuation at night, that the patient may rest after cleansing and dressing the rectum.

When hemorrhage does occur it can usually be controlled by rest in the recumbent position and an injection of krameria.

If the hemorrhoids prolapse with each bowel movement, but properly recede, much benefit is obtained by lying down and applying cold compresses of suprarenal extract. If, however, they have to be replaced they should first be cleansed by careful washing with cold water and a soft

cloth or sponge then coated with the following ointment and replaced:

℞ Ichthyol gr. xv
 Ung. Ac. Tannici 3 ii
 Ung. Hydrastis 3 i

In this class of sufferers the regular daily use of cold water is of much benefit. After each evacuation an enema of one-half pint of cold water is used to constrict the tissues and tone up the blood vessels.

If ulceration exists subgallate of bismuth or oxide of zinc will tend to check the hemorrhage and relieve the ulceration. Opium should not be used because it causes constipation. When sphincter spasm is a prominent symptom it may be relieved by dilation of the sphincters, as will be spoken of later.

Hemorrhoidal sufferers should avoid strenuous exercise, bicycling, riding, automobiling and railway journeys, as these all maintain a position with the thighs flexed, which opens the anus below the internal sphincter, thus losing the anal support. By careful close attention these patients can usually be made very comfortable, but of course, it is only tentative and not curative.

Many patients are so satisfied with the palliative treatment that they will not consider operative measures, and yet others who have these recurrent attacks will ask for a radical cure later.

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NON-PERFORATIVE APPENDICITIS FOLLOWED BY PERITONITIS OR ABSCESS*

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 SURGERY

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The occurrence of peritonitis and abscesses associated with cases of non-perforating appendicitis has led me to the study of this condition. It is generally understood that peritonitis or an abscess following appendicitis is due to a perforation or to gangrene. My observations in a number of cases, however, have caused me to believe that these conditions may be due to other causes, and consequently I have looked up the literature, performed experiments and made a study of sections of acute appendices by means of bacterial stains.

Aschoff describes two types of appendicitis; in

one, abscess formation in the wall occurs, in the other pseudo-membranous changes. He found the muscle destruction beginning opposite the crypts of the lymph area.

Kelly and Hurdon divided acute appendicitis into: catarrhal, where the mucosa is involved; diffuse, in which the mucosa and all of the coats are involved; purulent, gangrenous and perforative types.

In the study of non-perforative types of appendicitis with peritonitis or abscess, it is essential that we first define perforation of the appendix. Perforation, Kelly and Hurdon state, is due to extension of the erosion to the peritoneal surface, the degeneration of tissue in the vicinity of an abscess focus or is the result of circumscribed or general gangrenæ. Pin hole perforations may result from the continuance of a purulent process along a muscular hiatus, necrosis of tissue being most important. The absence of perforation may be evidenced by absence of opening in the wall, maintenance of fluid under tension in the appendix, lack of areas of necrosis or gangrene, and possibly to the absence of colon bacilli in the exudate.

In absence of a perforation we must account for the presence of organisms in the peritoneal cavity with or without extensive inflammation.

It is possible with multiple small abscesses scattered throughout the wall of the appendix for one to rupture into the peritoneal cavity. In the absence of this condition or of areas of necrosis and with an apparently intact wall, peritonitis is more difficult to explain. Krogus thinks that peritonitis without lesions of continuity of the appendix is due to virulent bacteria. Riedel believes it is due to penetration with destruction of the wall or actual gangrene. This condition has also been noted by various other writers (Sprenkel, Deaver, Giertz, Kelly and Hurdon).

Peritonitis without perforation of the bowel is not limited to inflammation of the appendix, but may occur from other places in the intestinal tract. As an illustration, Svartz and Hansen reported a case of typhoid fever with purulent peritonitis due to the propagation of the inflammation through the intestinal wall without perforation. In a review of the literature of this condition they state that between 40 and 50 cases of peritonitis caused by propagation through the wall have been reported in cases of typhoid fever. They state that 25 per cent recovered following.

*Read at 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

operation. In 4 cases typhoid bacilli were demonstrated in the exudate.

McClure found bacteria in the peritoneal cavity following experimental obstruction with ligation. These bacteria were present in 45 per cent of cases of colon obstruction. In 28 per cent of the cases the small intestine was obstructed. He concluded that, with disturbances of circulation, hemorrhage, necrosis or ulceration in the strangulated or obstructed loop of bowel, outwandering of bacteria into the general circulation and peritoneal cavity took place quite rapidly.

Malvoz found bacillus coli in 6 cases of peritonitis without perforation of the appendix, and other organisms are reported by other writers.

penetrate the apparently intact wall of a peritoneal abscess and cause a secondary abscess.

The primary result of inflammation of the wall of the appendix is the formation of an exudate in the peritoneal cavity. Kelly and Hurdon liken the abdomen to a large lymph sac. This is connected through lymph spaces with arteries on the one hand and lymph spaces on the other. In the normal state inflow and outflow are regulated so that the endothelial surface is constantly moist.

The early exudate may be the result of mild or severe circulatory changes or to the irritation of bacterial or tissue toxins. Its functions may be to dilute the toxins and to form a building substance for fibrin and adhesions.

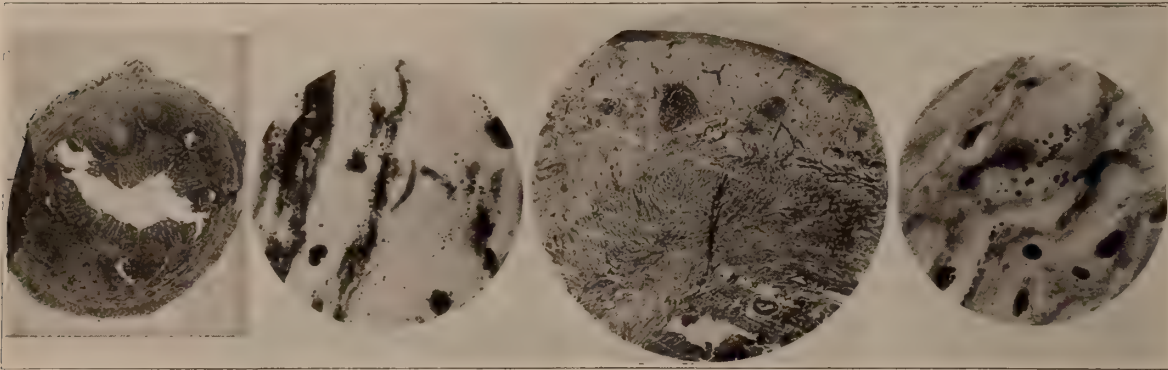


Fig I

Fig II

Fig III

Fig IV

Fig. 1. There is no evidence of necrosis of the wall or ulceration of mucosa. (Case 2.) This section was torn slightly otherwise the mucosa is intact.

Fig. 2. Gram positive cocci are present throughout entire wall. Many are included in the round cells. (Case 3.) This field is taken from the muscle layer.

Fig. 3. There is no ulceration of mucosa; areas of round cell aggregation are seen in the subperitoneal region. (Case 5.) The mucosa is intact.

Fig. 4. Numerous cocci are present. These are Gram positive. They are present in all parts of the wall and the round cells contain many of them. (Case 5.) This is a part of the muscle wall.

Number of Experiment	Cathartic	Date	Operation Specimen Removed	Remarks	Post-operative Catharsis	Operation and Necropsy	Remarks
					No. 1 c.c. pill daily from 2-23 to 3-1		
1	No. 2 compound Cathartic pills	2-20-18	24 hours	No marked changes	2-21-18 2 c.c. pills	3- 2-18	Most changes in colon
2	Cathartic pill No. 1 compound	2-20-18	24 hours	Most changes in cecum	3 cascara pills daily 2-25 to 2-28-18	2-23-18	Most changes in cecum
3	No. 3 cascara pills daily two days	2-20-18	48 hours	No marked changes	0	3- 2-18	Most changes in cecum
4	200 c.c. castor oil	7- 5-18	24 hours	Most changes in colon	0	7-16-18	
5	100 c.c. castor oil	6-28-18	24 hours	Most changes in cecum	0	6-29-18	
6	100 c.c. castor oil	7-15-18	48 hours	Most changes in cecum	0	7-17-18	

Chart 1. Resume of experimental study. Microscopic examination of the various parts of the large and small intestine following catharsis was made in all cases.

We have most of us seen post-mortem the extension of a peritonitis through the diaphragm, without perforation or gangrene, and producing an acute pleuritis, or extension in the reverse way.

Kelly and Hurdon state that bacteria may

When this exudate later becomes turbid and purulent it will usually contain bacteria. The exudate has bactericidal properties according to Kelly and Hurdon. Phagocytic properties are undoubtedly also present. The action of the

phagocytes is well demonstrated in the wall of the appendix in two cases I shall cite later.

The occurrence of bacteria in the peritoneal cavity in all stages of viability is probably more common than usually supposed. Extensive peritonitis is prevented by the bactericidal exudate and the phagocytes.

Serofibrinous non-purulent exudate is usually present only in early or mild cases. Spengel concludes that this free exudate in non-perforating but early stages of infectious appendicitis has not very infectious properties. When the exudate becomes turbid and purulent, he states it will nearly always give a culture of bacteria.

In going over the following five especially significant cases, I shall not consider the condition in which the appendix is merely covered with a fibrino-purulent exudate but where a frankly purulent fluid or abscess is present.

In cases one and two, large walled off abscesses were present. The acute inflammation in the appendix had largely subsided and there was no evidence of perforation. (Fig. 1.) In cases three, four and five, a peritonitis was present. In case three a staphylococcus was cultured from the peritonitis. Nearly all of the round cells throughout the appendix wall contained organisms in cases three and five, the latter of which illustrates particularly well early changes.

Case 1. H. B., boy, aged 16 years.

Previous attack of appendicitis 5 years ago. Several mild attacks since. Present attack 7 days ago; very sick. Given several hypodermics. There was a severe diarrhea but it may have been due partly to saline cathartics, which he was given several mornings. Pain and bloating subsided yesterday. White blood count 15,000.

Emergency operation: Adhesions of bowel and abdominal wall. Appendix surrounded by an abscess. A large pelvic abscess present. An inflamed non-perforated appendix removed. Drainage to the pelvis and cecal region.

Sections of appendix: Extensive diffuse round cell infiltration of the wall; no ulceration of wall.

Case 2. L. W., girl, aged 11 years.

Five years ago patient had two severe attacks. Stomach trouble ever since.

Onset of present attack 2½ weeks ago. Given hypodermics nearly every night. The first 4 days of the last week given castor oil every morning. Three days ago the pain lessened. White blood count 21,000.

Emergency operation: Bowel and omentum adherent. Appendix surrounded by a large abscess.

Hyperemic appendix removed. A large pelvic abscess present. Drainage of peritoneal cavity.

Sections of appendix: Blood vessels engorged. Limited amount of diffuse round cell infiltration throughout the wall. Mucosa is intact. (Fig. 1.)

In the remaining three cases in which the attack was much more recent, there was no walled off abscess. In Case 3 there was a purulent primary local peritonitis. In Case 4 the purulent peritonitis was widespread. In Case 5 the peritonitis was limited to an early sero-purulent exudate.

Case 3. E. F., boy, aged 13 years.

Several previous attacks during past year. Onset of present attack three days ago with cramps. Seriously sick and very toxic. White blood count 29,400.

Emergency operation: Large amount of purulent fluid and a primary peritonitis. Hyperemic appendix removed. Drainage established. A staphylococcus reported from cultures of peritoneal fluid.

Sections of appendix: Diffuse inflammation throughout the wall. No ulceration of mucosa. Gram positive cocci present throughout the wall of the appendix. Many of these are included by the round cells. (Fig 2.)

Case 4: W. A., boy, aged 10 years.

Spells of vomiting without pain during the last three years. Onset of present attack three days ago. One day ago given 2 ounces of castor oil in the morning and 2 ounces in the evening. Seriously sick. White blood count 19,000.

Emergency operation: Large, acutely inflamed appendix removed. Free purulent fluid throughout peritoneal cavity. Drainage.

Sections of appendix: Extensive round cell infiltration extending throughout the wall.

Case 5: C. H., boy, aged 13 years.

No previous attacks. Onset 4 days ago. Given a good catharsis 2 days ago. Following this the pain became worse and localized in the right lower quadrant. White blood count 13,700.

Emergency operation: Acutely inflamed friable appendix with a fibrous band compressing the base. Slight sero-purulent exudate.

Sections of appendix: Diffuse round cell infiltration throughout the wall. There are several groups of round cells but no abscess formation in the wall and subperitoneal regions. (Fig. 3.) Numerous Gram positive cocci occur throughout the wall (Fig. 4.) Most of the round cells contain several of them. A Gram positive short chain coccus was reported from cultures taken from contents of appendix.

In two cases bacteria may be seen in the stained sections penetrating all layers of the wall (Fig. 2, 4).

Large numbers of cocci are contained in the round cells throughout the wall. Peritonitis under these conditions is quite different from that following a sudden perforation with penetration of infected material or intestinal contents. It is a more gradual process.

During the acute inflammation of the appendix

bacteria may penetrate the wall. In the presence of a bactericidal and highly phagocytic exudate they are soon devitalized. The inflammation may quickly subside or only a local abscess may result.

Cases 1 and 2 illustrate the subsidence of the acute inflammation in the appendix with integrity of the walls while there remains a large peri-appendiceal abscess.

On section and microscopic examination there was evidence only of a slight or chronic inflammation with some infiltration with round cells and a few polymorphonuclears.

From a study of this group we see that bacteria may penetrate the wall of the appendix very early. Actual abscess formation in the wall is not seen, although frank pus is present in the peritoneal cavity. Ulceration of the mucosa and gangrene of the wall are not necessary. It is possible for a subsidence of the inflammation in the appendix under these conditions with integrity of its wall.

Bacteria which have entered the peritoneal cavity may find conditions favorable for growth. Probably the bactericidal action of the fluid and phagocytes largely control their extension. Various conditions may mechanically or physiologically disturb this protective action, such as catharsis or operative trauma.

Further bacteriological studies especially on the early cases are planned.

Considering the treatment of these cases, all but one, Case 5—with slight fibrino-purulent fluid—were drained.

I feel reasonably safe in closing the abdomen in other conditions as well as in appendicitis, in the presence of a limited amount of recent contamination, providing the source of infection is removed.

Bancroft in a large series of appendicitis cases demonstrates a lower mortality and fewer complications in cases containing free fluid without drainage than in those which were drained.

Necessarily during operation in these cases containing purulent exudate especially a minimum of trauma and contamination must be observed, since failure may encourage a serious peritonitis.

The Effect of Cathartics. In all cases observed of non-perforative appendicitis with local peritonitis or abscess there was a definite history of cathartics having been given to the patient.

Alvarez has shown that peristalsis is more

active in youth than later. Since these were all young persons this fact must be considered. Moynihan states that appendicitis is more dangerous in youth and also in old age.

Alvarez and Taylor studied sections of excised intestines following various cathartics in rabbits. They found some parts of the intestine abnormally irritable, while others failed to respond at all to powerful stimuli or fatigued quickly. They observed injection of the intestinal wall and engorgement of the mesenteric vessels following catharsis in many rabbits.

It is possible that cathartics have a predisposing or exciting cause in the development of peritonitis or abscess in the absence of perforation or gangrene.

I performed a series of experiments on 6 dogs to determine, if possible, any microscopic changes in the intestines following various cathartics.

Castor oil, compound cathartic and cascara pills were given. Twenty-four and forty-eight hours after catharsis, I operated on these animals and removed sections from various parts of the intestines.

Following operation in three experiments cathartics were given daily from 1 to 6 days. Specimens were again removed from the intestines under ether, following which necropsies were performed.

Microscopic examination of the small intestine, cecum and colon showed only slight changes twenty-four or forty-eight hours after catharsis. There was evidence of some stasis of the blood stream with capillary dilatation. Ecchymosis was present in one case. In one, experiment 2, there was some polymorphonuclear infiltration near the blood vessels in the cecum. Catharsis following operation, in these cases, resulted in an exaggeration of the above changes. Ecchymosis could be found more frequently, blood vessel stasis and engorgement were fairly constant with the occasional occurrence of thrombus (experiment 5 in the cecum), and polymorphonuclear infiltration. The greatest changes in four of the experiments were in the cecum, in two they were in the colon.

CONCLUSIONS

1. The occurrence of purulent peritonitis or abscess in appendicitis may occur without perforation of the appendix.

2. All of the patients from which these con-

clusions are drawn were young and were given cathartics during the appendicitis.

3. After experimental catharsis engorgement of the intestines, ecchymosis and round cell infiltration may occur. These changes were usually more marked in the cecum and were exaggerated by catharsis following laparotomy.

4. Bacteria may extend throughout the wall of the appendix without ulceration of the mucosa.

5. In the absence of perforation, more or less viable bacteria may be present in the peritoneal cavity.

6. Gentle technic with little disturbance of the viscera and removal of the appendix are indicated. In the presence of extensive peritonitis or abscess, drainage is necessary.

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DETACHMENT OF ADHERENT PLACENTAE AND DELIVERY IN ABORTION*

C. E. RUTH, M. D.

DES MOINES, IOWA

The great frequency of abortion from whatever cause, together with its frequent grave complications gives the subject sufficient importance to justify its careful consideration.

Complete detachment of the placenta is at times difficult and in many cases it is imperfectly accomplished, and at others much needless trauma is done, besides increasing the danger of infection and sterility by the manipulation intended to detach and remove the secundines.

Were the index finger of sufficient length, it would be the ideal instrument with which to produce detachment of the placenta because its tactile sense makes it an instrument of precision, able to practically see and know the condition.

Unfortunately the longest finger is just almost, but not quite long enough for the work, in many cases, as I have abundantly verified on frequent occasions.

Placental forceps on the market are absolutely worthless as detachers of the placenta and any ordinary forcep can remove a placenta which is already detached.

The impossibility of effecting detachment of the placenta by the finger in many cases, the uncertainty and danger of the auger and curet,

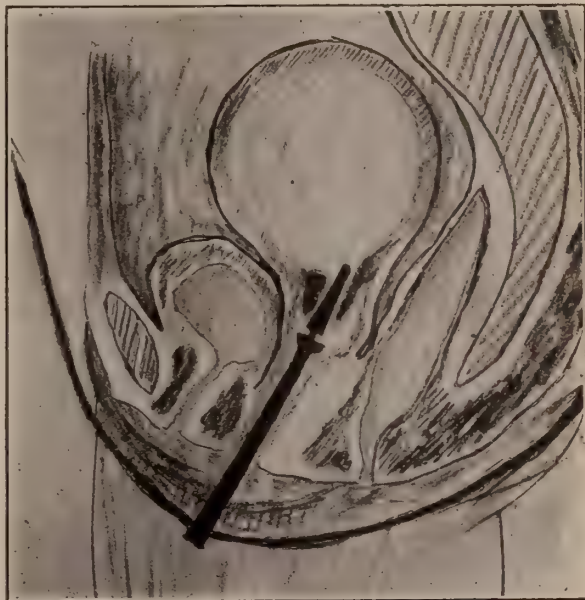


Fig. 1.—Hard rubber dilator on stem, inserted into cervical canal. The elastic bands, necessary to keep constant the small force needed to accomplish dilation with this method, are attached to the lower end of the stem below and to a binder or adhesive around the abdomen, above.

even in the most skilled hands has caused a large percentage of the profession to abandon all attempts at removal of secundines in abortion cases with adherent placenta.

These physicians allow the secundines to come away by putrefaction as safer than manipulation of any kind.

Not one physician in one thousand would seriously consider leaving the bedside of a patient for more than a few minutes until the placenta was delivered, in a case of labor at term.

The placenta has as certainly lost its function in the case of abortion as in labor at term and its being allowed to remain in abortion is only an admission on the part of the surgeon that he cannot safely remove it.

*Read before the Annual Assembly of the Tri-State District Medical Society, Oct. 4-7, 1920, at Waterloo, Iowa.

Failure to remove the placenta following labor at term would by most physicians be considered criminal.

The surgeon should, can and usually does prevent infection in wounds elsewhere and he should be as able to do clean work here and give his patient protection against infection by emptying the uterus at once and thus save her from the dangers of death, prolonged illness, permanently impaired health and sterility.

I am convinced that the uterus can always be safely emptied if done promptly, before putrefaction changes have begun accompanied by pyrexia, septicemia and abscess formation.

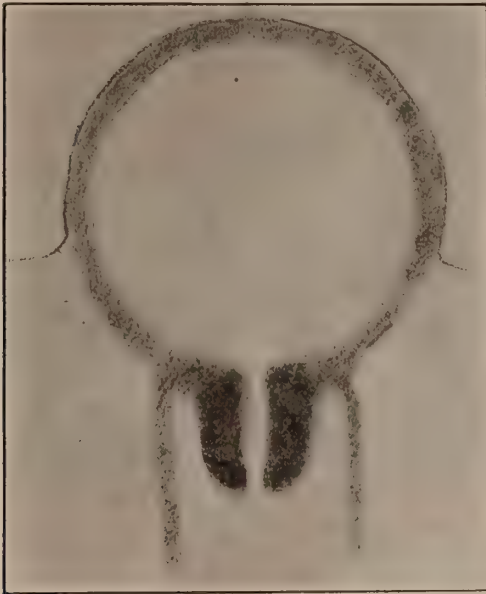


Fig. 2.—Diagrammatic sketch of uterus in early months of pregnancy, showing globular character.

The method presented to you herewith is not an untried thing but one I have used for thirty years and have tested to my entire satisfaction before asking consideration by the profession.

The body of the uterus in the early months of normal pregnancy being almost perfectly spherical with the neck from one to one and one-half inches in length, it follows that any appliance to be of service in detaching an adherent placenta must be able of application to every part of the interior of a spheroid.

If such an instrument is to be of the forceps type, it must be capable of being made small enough to be introduced through a long cervical canal; it must be capable of expansion entirely above the narrow cervical canal; must be so con-

structed as to be made to reach every portion of the interior of the uterus and clear it of detached placental tissues and membranes; and when that is done it should be capable of being closed and withdrawn, bringing with it the placenta and membranes in such a manner that no harm is done to the patient, and with the minimum of pain.

Such an instrument I devised in two sizes, and have used for many years with satisfaction, though I have never until within the last year

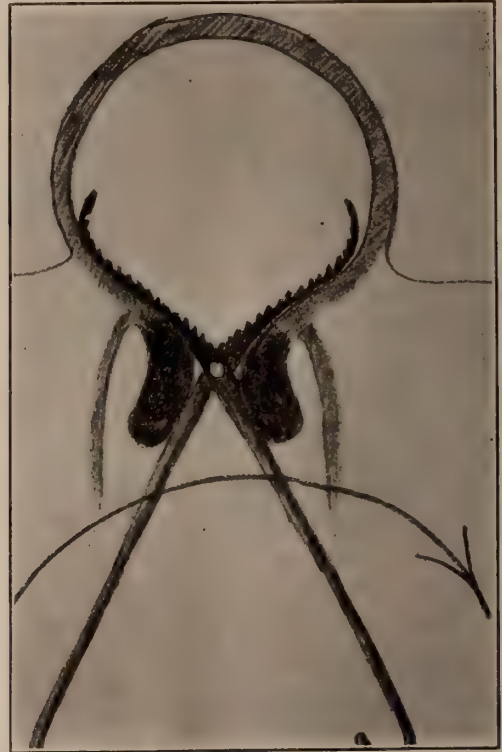


Fig. 3.—Detacher introduced, spread, and ready to sweep the lower segment.

attempted a public description of its virtues and use.

The stage of gestation and resulting size of the uterine cavity, will determine the size of the instrument to be used, in detaching the secundines in any individual case.

In some cases while abortion is inevitable the cervix is not sufficiently dilated for instrumentation of the uterine contents.

In such cases the use of the hard rubber dilator with elastic pressure will accomplish the dilation in a few hours, without trauma, without anesthesia, and without abrasion of the mucosa. Then with or without anesthesia the detacher is

introduced under aseptic precautions with the jaws closed, while the fundus uteri is depressed and the handles of the detacher are carried backward, so as to bring the uterine and vaginal canals in as nearly as possible a straight line.

The fundus uteri is steadied by the left hand above the pubes, while the right hand spreads the jaws of the detacher and holds them firmly in contact with the lower internal surface of the uterus.

In this position the detacher is rotated and

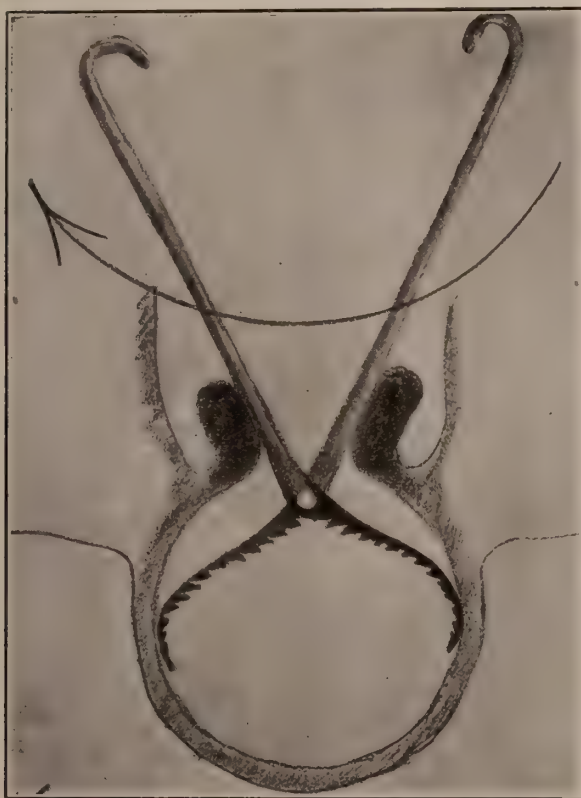


Fig. 4.—Detacher further introduced and sweeping the midportion of the uterine wall.

the lower segment is swept by a complete rotation.

The detacher is then inserted an inch farther and again rotated in the same direction; this farther insertion and rotation always in the same direction is repeated until every part of the interior of the uterus has been cleansed, then the jaws of the instrument are closed and instrument, placenta and secundines are gently withdrawn while the rotation is continued until all is delivered.

Proper care in the use of the instrument will usually result in a complete detachment and de-

livery of the placenta and membranes at the first trial.

There is however no objection to repeating the performance, if there is any question as to complete removal.

Steadying of the fundus with one hand, while the instrument is rotated on the interior produce very active uterine contractions materially aiding separation of the placenta.

The instrument was originally made to present a dull margin against the uterine wall while rotating to the right. When rotating to the left brought a sharp angle in contact with the area

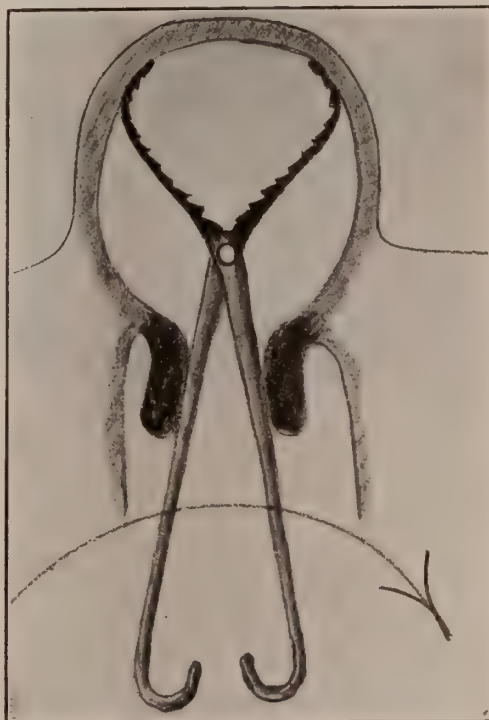


Fig. 5.—Complete introduction of the detacher for sweeping the upper segment.

from which the placenta and membranes are to be attached.

At the present I should never recommend the use of a sharp edged or angled instrument in detaching the placenta. Great harm has resulted from the use of the sharp curet in these cases.

I have twice perforated the uterus with a curet and I have seen septic uteri through which the finger could be passed with very slight resistance being encountered. A case of perforation of the uterus during curetage was reported to me which occurred within the last four weeks.

I am convinced that thousands of women have

been rendered sterile by the curet with no compensating benefits.

The auger principal of detachment is scarcely

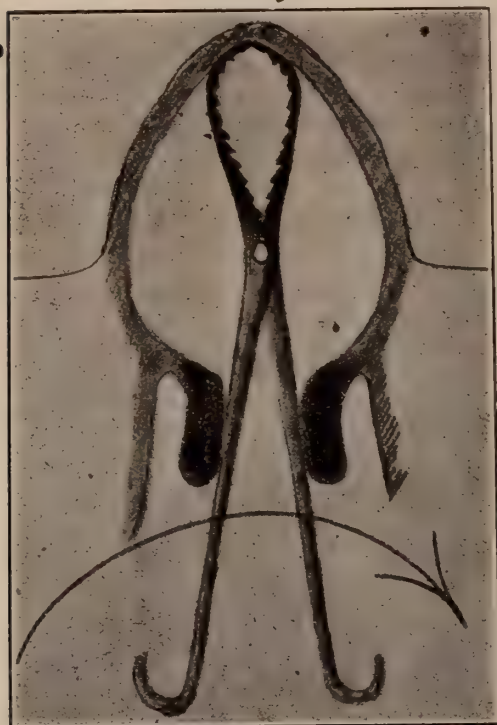


Fig. 6.—Last stage of the rotation completed, placenta and membranes caught in and surrounding the blades. The forceps are closed and ready to be withdrawn.

less dangerous than the curet and its use in detachment and delivery is principally in the stimulation of the uterine contraction.

Thorough disinfection as possible should accompany all instrumentation of the uterine cavity and be followed by tubal drainage in all septic cases.

GENERAL CONSIDERATIONS CONCERNING PROSTATECTOMY AND PROSTATIC MORTALITY*

EDWARD WILLIAM WHITE, M. D.

CHICAGO.

The subject of prostatectomy will always be of keen interest to the urologist and general surgeon; it is indeed common ground where both may tread, and where a multitude of knowledge is as yet unclaimed. The average general surgeon or genito-urinary surgeon, is well equipped to perform a technically good prostatectomy but

the technical removal of the gland is of secondary importance, when you consider that prostatectomy, except for the route of approach, has changed only in minor details in the last decade, and the true causes of our present low mortality are, selection of cases, pre and post-operative considerations and cystoscopic interpretation.

The cystoscope has practically revolutionized the treatment of obstructions at the vesicle neck, Contractures, polyps, prostatic bars, early carcinomas, etc., are now differentiated cystoscopically and correctly treated, where as formerly all were prostatectomized.

It is not my intention to convey the impression that a skillful prostatic removal does not influence mortality, but to state that it is simply a factor in a lowered mortality. Our present knowledge of kidney function and dilatorious effects of prolonged back pressure, our rational pre and post-operative care, our judgment in the selection of cases, etc., have contributed more than surgical skill in lowering this mortality, I further believe that the increasing frequency with which these cases are being referred to the urologists with their armamentarium for cystoscopic study, has been a very potent factor in improving efficiency and elevating the standards of prostatectomy.

Selection of Cases. Careful judgment based on experience should be utilized in the selection of cases for prostatectomy.

Patients with mild degrees of prostatic obstruction regardless of the size of the gland, should not necessarily be operated on. We commonly encounter enormous hypertrophied prostates, with but slight obstructive findings, whereas, a small hard prostate not infrequently causes large retention with marked obstructive symptoms; hence the degree of enlargement is no criterion in the selection of cases for operation.

We have seen patients with moderate enlargement, obstruction and retention, who experiences very slight if any inconvenience, in which we advised against prostatectomy.

Patients with vascular changes, high blood pressure etc., are not poor surgical risks, as a large majority of prostatitics have blood pressures of 175 to 200.

Pre-operative preparations do not influence these conditions, and they have not elevated our mortality to a degree of apprehension.

*Read before the Chicago Medical Society, March 9, 1921.

Cases with large retention and clear urine have generally hydronephrosis and hydro-ureter associated, hence the necessity of a careful pre-operative course prior to prostatectomy. These cases are easily infected by efforts to promote drainage, either by the indwelling catheter or suprapubic cystotomy, acute pyelonephritis may quickly develop, only to be followed by uremia and a fatal termination. I am of the opinion that the indwelling catheter in these cases is of inestimable value and frequently superior to a suprapubic cystotomy, due to the fact that the obstruction to renal function is more gradually relieved, hence less shock to the cardio-renal-vascular system.

Cases of extreme retention who have been accustomed to a catheter life, are generally good operative risks, due to the immunity established through the use of auto catheterization, thereby preventing extensive involvement of the ureters and kidneys by back pressure. These cases in our experience should generally be operated on in two stages, with no undue haste intervening. Patients should be given the advantages of prolonged drainage when necessary; 5 to 8 weeks is not an exaggeration if the condition warrants in selected cases.

We have seen a large number of patients of early prostatic enlargement with but small retention, who generally come under observation about the age of fifty, they have few if any symptoms, except slight difficulty in voiding which appears at transient intervals. I should advise against operating in these cases, as it is certainly not imperative and the symptoms are always relieved by such palliative measures as hot sitz baths, posterior dilators and sounds. I do not infer that these patients should continue on palliative measures until serious and irreparable damage has been established to kidneys and ureters, but I venture to assume that these cases are more scientifically treated when intelligent pre-operative measures are instituted, until the retention increases and more urgent symptoms arise. Acknowledging our theory of immunity and the serious results of prolonged back pressure, I hold in favor of palliative measures in early prostatitis, up to a certain period of safety.

Prostatic enlargement in extremely old and debilitated patients, especially where the general health has been impaired by prolonged tolerance of such symptoms as painful, frequent and urgent

urination, naturally require careful consideration. Patients of this class have gross pathological changes in the urinary and vascular systems, and must be given a very thorough pre-operative course prior to any surgical intervention. The indwelling catheter is here more universally tolerated than in younger cases, and I believe should be instituted for a definite period before the cystotomy, thereby relieving the cause of obstruction more gradually. These patients are usually infected, their bodily forces are at a low ebb, hence their powers of repair are slow in reacting.

I am of the opinion that the nature of the anesthetic in these cases is of paramount importance. The shock and depression attending any respiratory anesthesia are poorly tolerated, due to the impaired condition of the heart and kidneys, and the ever present possibility of aspiratory pneumonia. I would advise in these cases a local anesthesia of 1 percent novocain and sacral narcosis for the enucleation of the gland. Sacral anesthesia is absolutely free of danger and entirely satisfactory. These old patients should be up and about as soon as possible, following the removal of the drain; their convalescence is thereby greatly hastened.

Cases of sudden onset with a previous symptomless history, as a general rule are a greater risk than the old prostatic who has had mild obstructive symptoms over an extended period. The above is not difficult to comprehend when you consider that the operative cases of early and sudden onset have been afforded no opportunity for the cardio renal systems to adjust themselves, hence the hurried removal of obstruction is frequently followed by marked depression and a fatal termination.

In cases of long standing in which a cystitis and pyelitis are associated, we note our mortality comparatively low, simply because any infection which may follow the removal of the gland is not overwhelming, since the patient is practically immune prior to the operative course; in other words, these cases are well fortified in having had a cystitis and pyelitis of long duration.

I might add in a general way that the same cycle of events is to a varying degree apparent in all cases of prostatic overgrowth. It is a case of infection produced by or resulting from obstruction and back pressure on the kidneys and

ureters, with a progressive absorption of septic products. The treatment is to relieve this condition of back pressure and establish drainage with as little shock to the patient as possible. The methods at our disposal for accomplishing this, depends upon the age and general condition of the patient, the amount of retention and the character of the urine.

Pre-Operative Preparations. In considering the pre-operative preparations of patients for prostatectomy, we have arrived at a definite routine to which all cases are subjected, namely, a careful estimation of kidney function, regular periods of catheterization, the character and degree of obstruction by cystoscopic examination, also blood and urine chemistry.

Blood chemistry in these cases gives more valuable information and is certainly more trustworthy than any other single series of laboratory observations. A correct understanding of the blood sugar, creatinin, blood urea and uric acid content, gives definite and absolute information as to the patient's metabolic state and renal efficiency, whereas, phthalein, methylene blue, or any other functional kidney test, simply reveals the renal filter power. I cannot too forcibly recommend the employment of blood chemistry.

The total output of urine and urea are daily estimated, also routine blood pressure should be taken, in order that we may estimate the falling off of arterial tension, as soon as the patient's kidneys and bowels are eliminating.

Attention should be given to the gastro-intestinal tract, since a majority of cases have gastro-intestinal disturbances which are secondary to the uroseptic state so common in these patients. We advocate a daily colonic flush which has the two-fold purpose of reducing the irritability of the prostate and cleansing the lower bowel. The permanent or indwelling catheter which is frequently advocated to supplant the preliminary cystotomy, has not been well tolerated, hence we prefer to institute regular periods of catheterization, when voiding is difficult and the retention of considerable amount.

It is, indeed, interesting to note the marked improvement in these prostatic cases, after being subjected to a thorough regime of pre-operative preparations. The general state of health is improved, uresepsis, intestinal and gastric symptoms

are relieved, and the patients are materially fortified to withstand a prostatectomy.

Post-Operative Preparations. In presenting this phase of the subject I will offer for your consideration the most important issue, namely, hemorrhage. Hemorrhage is infrequently seen, due to the fact that the prostate is pushed up into view before any attempt at enucleation and considerable care is utilized in obtaining the proper cleavage. If you pause to consider the fact that the prostate lies in a bed, abundantly supplied by nerve and vessels, you will appreciate the value of proper cleavage and careful removal.

Speed of enucleation is of considerable value but not at the expense of a normal convalescence and a satisfactory result. Hemorrhage is successfully controlled by exerting firm pressure in the capsule from 3 to 5 minutes at the time of the operation, also hot water irrigations in the prostatic capsule. We rarely resort to bladder packing, impregnation of fat or inflated bags. If the hemorrhage is severe we generally rely on adrenalin in normal salt subcutaneously and injections of pituitrin or hemoplastin.

Choice of Operation. The choice of operation depends on the case. Doubtless all will agree that a completed prostatectomy at one sitting, if you please, is more desirable in most cases. Originally all were prostatectomized at a single stage and during this period mortality was extremely high. This was followed by a wave of two stage operations, which in itself, was directly responsible for greatly reducing mortality, however, not until a more systematic and scientific study was given these cases, did prostatectomy arrive at its present lofty state of efficiency.

Our selection of cases based on definite scientific data has enabled us to properly determine the choice of operation to pursue. We know from experience fortified by correct clinical observations which cases should be operated on in one stage and in which a two stage operation is preferable, which should be operated suprapubically or by a peroneal route.

Methods of Approach. This phase of the subject has been a bone of contention for years among urologists and general surgeons. A careful review of the literature on this subject, since prostatectomy has become a developed surgical entity, leaves one in a rather confused state of mind as to the relative merits of the methods of

approach, namely, suprapubic or peroneal. It is generally understood that we are all more or less influenced by former teaching and experience, hence we become ardent advocates of the route we were originally taught, to the exclusion of the other; further we would lead you to believe that our method of approach is incomparably superior, etc., to any other. In other words, we become single tract prostatectomists and only grudgingly admit indications for any other method. The avenue approach, in my opinion, is of little consequence since the enucleation of the gland is one and the same in both cases. The surgeon will naturally select the operation in which he is most skilled and which gives the best functional results; however, there is a certain class of cases in which a selection of route might lead to better post-operative results.

Indications for Suprapubic. 1. The chief objection to peroneal operations is the possibility of incontinence and dribbling, hence cases in which peroneal operations have been previously performed or cases with infiltrations and scars in the deep urethra, should be operated on suprapubically.

2. Hypertrophied prostate complicated by stone formations.

3. Spinal cases complicated by prostatic hypertrophy. In these cases the danger of incontinence is alarming regardless of the route; however, the suprapubic is preferable.

4. Large intravesical enlargement with extensive dilatation of the internal sphincter. These cases should be operated on suprapubically, as the sphincter is greatly relaxed and the peroneal dribbling would persist over an extended period.

5. Where a cystotomy has been performed the case should be continued with a suprapubic enucleation.

6. Cases with inguinal hernias or with large pendulous abdomens, present no contra-indications to suprapubic removal.

7. Cases of extreme old age and markedly debilitated, with large adenomatous hypertrophies are better operated on suprapubically. These old cases withstand operation remarkably under local and spinal anesthesia.

Indications for Peroneal Route. 1. Small hard fibrous prostates are best removed through a peroneal incision, as there is no dilatation of the internal sphincter and they are often very difficult to remove suprapubically. These pros-

tates are frequently removed piecemeal by the suprapubic route, and not infrequently a troublesome fistula remains which must be closed surgically.

2. Cases in which there is a localized area of malignancy, are possibly better attacked through a peroneal incision. The posterior lobe is generally first involved in carcinoma, and these prostates are often difficult if not impossible to remove suprapubically; further through a peroneal incision, the carcinomatous area could be completely incised without doing a radical operation.

3. Cases which have been incompletely operated on suprapubically and portions of the gland are still intact, should be operated on through the peroneum, if symptoms again arise.

4. Cases are frequently seen following suprapubic operations, in which voiding is quite difficult, although the gland has been completely removed. This condition is generally due to contractions or stricturous formations in the prostatic or membranous urethra following prostatectomy. This unfortunate post-operative complication, is generally corrected by the passage of graduated sounds, or a peroneal section.

5. Cases of advanced pelvic deformities are more correctly operated on through the deep urethra.

In reviewing the above indications for suprapubic and peroneal prostatectomies, it is not difficult to comprehend that the vast majority of prostatics present definite indications for the suprapubic route, and the unusual or exceptional cases fall in the minority or peroneal class. I feel it no more than right and just to frankly admit, however, that better knowledge in the technique of both procedures would be of much benefit to surgeons and patients; without a question of doubt cases are often operated on suprapubically, which would have given better functional results had they been operated on from below. This benefit is not given patients, however, due to the surgeon being familiar with but one avenue of approach. For the intelligent and unbiased surgeon the selection of operation to be employed in a given case should not be influenced by technical difficulties presented by either method, but the operation of choice should be the one which will lead to the best functional results and subject the patient to the least risk.

7 West Madison Street.

INFECTION AS A CAUSE OF STILLBIRTH, WITH REPORT OF A CASE IN DETAIL*

EDWARD L. CORNELL, M. D.,
CHICAGO

March 17, 1917, I reported a case of stillbirth in which pneumococci were found in both mother and baby.¹ A further report can be made now as the patient has been delivered of a live child. In order to bring the case report up to date a portion of the previous record is included in this communication.

The patient, Mrs. E., was first seen by me May 4, 1916, at which time she was 26 years of age. She had had a stillbirth at full term several years previously. The baby was alive until she went into labor. It weighed 7½ lbs. It was born with a nasal discharge, but no cultures were made. Two years later she had a miscarriage which required a curettement. The perineum was also repaired at that time. She had had frequent nosebleeds for years. Her appendix was removed in 1916. The tonsils were apparently clipped in 1910.

At the time of her first examination she was 6 months pregnant. Her pelvis was slightly contracted. Her blood pressure was 130-70. Nothing important developed before delivery.

On August 3, she went into labor which was without incident except that the fetus died suddenly before delivery could be completed. It was in a state of asphyxia pallida. It weighed 6 lbs. 5 oz. The necropsy revealed nothing pathologic except that the serous cavities contained more fluid than normal. Pneumococci were found in the fetal pleural cavity and pericardium. The Wassermann was negative in mother and fetus. Cultures from the vagina and tonsil crypts of the mother showed pneumococci and staphylococci. In spite of this the episiotomy wound healed by first intention. The patient ran a normal course throughout the puerperium. The laboratory work was done at the Michael Reese Hospital.

One year later the patient returned and asked permission to become pregnant. This was deferred owing to the fact that the teeth, nose and throat were not in good condition. X-ray pictures of the teeth by Dr. Hollis E. Potter showed evidences of rarefaction at the apices of the

bicuspid and molar which held the bridge in the upper left side of the jaw. The nose and throat were examined by Dr. Burton Haseltine who reported that there was "chronic suppuration of the ethmoids with all cells infected—probably only radical ethmoid operation would do permanent good, but the condition can be greatly improved by cleansing and tamponing."

I had the teeth corrected and Dr. Haseltine treated the nose from Aug. to Sept. 22, 1917, as the patient refused to have any operative work done.

In December the patient was found to be pregnant, her last period being October 21. Life was felt March 1, 1918. The blood pressure readings taken often after this throughout pregnancy were not abnormally high. Most of them reached 120 systolic and around 70 diastolic. One reading a month previous to her delivery registered 130-70.

Examination of the nose and throat in January, 1918, showed them to be in good condition. Again in June, 1918, they were negative. The teeth were in excellent condition. The urinalyses were negative except for a trace of albumin in the June specimen.

August 13, 1918, at 8 p. m., the patient stated she had had a few slight pains and that the bag of waters had ruptured spontaneously.

She reported at the Chicago Lying-In Hospital at midnight, at which time the pains were approximately 30 minutes apart and not severe. The next morning at 9 a. m. an 8 cm. Voorhees bag was inserted in the cervix inside the ruptured membranes. This stimulated the pains, the bag came out at 1:30 p. m. The pains subsided shortly after to reappear towards midnight on the 14th of August. They then became quite regular, about every 3 minutes until the cervix was fully dilated. The head did not engage readily, the liquor amnii did not contain any meconium. The fetal heart tones were in excellent condition.

After complete dilatation it was decided to use forceps as the head became engaged. Mid-forceps were applied and the baby delivered. After the application of forceps, meconium was noticed in the liquor amnii.

The infant weighed 8 lbs. 5 oz. Respiration started spontaneously. The child was fully developed and in excellent condition shortly after

1. Cornell, E. L.: J. A. M. A., March 17, 1917, LXVIII, 843.

delivery. Its length was 50 cm., and it presented all the evidences of a full term healthy infant.

The puerperium was normal, the highest temperature being 99.4 F. She made a prompt recovery and was discharged from the hospital Aug. 25.

April 26, 1921, she reported the child was in splendid condition, having been sick only a few days with an intestinal disturbance.

The important things to note in this case are:

(a) That the nose and throat were factors in causing the stillbirth.

(b) The nose bleeds were relieved by nasal treatments.

(c) The infant weighed nearly 2 lbs. more than the last stillbirth and 1 lb. more than the first.

It is not always possible to determine the cause of death in stillbirth cases. A certain percentage are due to syphilis, others to trauma, or congenital deformities. In the remainder it is seldom that any cause can be definitely assigned.

In securing the cause for abortions, stillbirths and in some cases of sterility, I have been struck with the frequency with which these patients are subject to diseased tonsils, teeth, appendix, or gall bladder.

I feel that if we would make more thorough examinations of these patients we would be able to eliminate many of the accidental fetal deaths.

The mode of transmission of the bacteria is either through the blood or by contiguity. I feel that in some cases a previous entermetritis may harbor some infective bacteria and these gain access to the fetus directly through the placenta.

In several cases where the fetus and its membranes were removed shortly after onset of abortion, we have found the placenta to be definitely pathologic. There has been round cell infiltration, which gives a definite picture of beginning abscess formation.

Most of this work has been done at the University of Chicago—Department of Fetal Anatomy.

These patients complain very little of any discomfort. It is only by thorough examinations that we are able to elicit tenderness or signs of trouble around the gall bladder or appendix.

It is my routine to take x-ray pictures of the

teeth where there are definite external signs of fillings or crowns. In over 75 per cent they have demonstrated various degrees of rarefaction around the teeth which are pulpless. These patients are then referred to the dentist and in a rather large number of cases the dentist has advised extraction or treatment of the teeth involved.

In the routine Wassermann work it was found that a large number of women gave a history of accidental abortion or stillbirth, and of these it was noted that 19 per cent were not chargeable to syphilis.

Williams recently gives the number of stillbirths in 4,547 cases as 302. Syphilis was responsible for 34.4 per cent; trauma, congenital, etc., 28 per cent, and miscellaneous as 38 per cent. His syphilis rate is high due to the large colored population.

In other words, approximately 38 per cent stillbirths cannot be assigned to any particular cause.

It is possible, if our medical research in this field was well developed, that we might find a rather large percentage of these cases due to non-specific infection.

Staphylococci and streptococci must be able to pass through the fetal membranes, just as easily as the spirochete. While it is difficult to prove, it seems plausible at least by analogy.

Abt reported a case of influenza transmitted to the fetus while it was still intrauterine.

Talbot goes so far as to say that the teeth are the source of infection which produces the toxemias of pregnancy.

Mosher, Warne-Kros and La Vake have noted focal infection in the toxemias of pregnancy. In many of these cases the fetus dies before delivery. While it is true trauma and premature birth may be the cause of these fetal deaths, there must be a certain appreciable percentage which die as a result of pre-existing infection in the mother.

In comparatively few cases, which I have been fortunate enough to see, it has been exceedingly difficult to secure cultures, and if they were secured, to get them to live sufficiently long to do animal experimental work.

Pathological difficulties and public aversion to autopsy make the work very arduous and disappointing. The diagnosis, therefore, is very difficult to establish. The scientific proof also is somewhat clouded. Clinically, the case I have

reported here does definitely seem to prove my point sufficiently well to call your attention to this possibility. I urge upon you the necessity of bearing focal infection in mind in the care of pregnant women.

OTITIC BRAIN ABSCESS*

G. W. BOOT, M. D.

CHICAGO

Brain abscesses are of five general types:

1. The result of trauma to the skull.
2. The result of disease in the immediate vicinity of the skull.
3. The result of pulmonary disease.
4. The result of accessory sinus disease.
5. The result of middle ear suppuration.

Of these various types all but the abscesses resulting from pulmonary disease result in the formation of but a single abscess as a general rule, while the cases of multiple brain abscess are usually the result of some disease of the bronchi, lungs or chest. The reason for this is that the former group produce their lesion by direct extension while the pulmonary group cause abscess because of infected emboli.

This method of formation has a marked effect on the location of the abscesses. In the traumatic group they are in the immediate vicinity of the injury. In the group resulting from disease near the skull the abscess is in the vicinity of the primary disease. In the sinus group the abscess is in the immediate neighborhood of the infected sinus causing the abscess and the same is true of the abscesses due to ear disease. In the group due to pulmonary disease since the abscesses are the result of emboli they may form anywhere in the brain where an embolus may lodge.

Brain abscess of otitic origin does not happen haphazard, but follows certain preformed routes. In the cerebrum this route is upward. In fetal life there is a suture running directly across the tegmen tympani. At times this suture does not become completely ossified. Strands of connective tissue remain and blood vessels perforate along the line of this suture. Because of this and because the tegmen is a very thin plate of bone, extension upwards is comparatively easy. The temporo-sphenoidal lobe of the cerebrum lies directly above the tegmen, hence cerebral otitic abscess is practically always found in the tem-

poro-sphenoidal lobe of the cerebrum just above the tegmen tympani.

Cerebellar otitic abscess has several routes of entrance. One is through the saccus endolymphaticus by way of the ductus endolymphaticus. This route of infection causes first empyema of the saccus endolymphaticus, then meningitis in its immediate vicinity and then abscess in the cerebellum in the vicinity of the saccus.

Another route for cerebellar abscess is by way of the internal auditory meatus. The infection of the middle ear reaches the labyrinth and thence follows the auditory nerve to the interior of the skull and causes abscess in the vicinity of the internal auditory meatus.

A third route is by way of the sigmoid sinus. The infection in this case first causes infection or thrombosis of the sigmoid sinus, then abscess just internal to the sinus. In any case the abscess will be found internal to the sinus and between the sinus and the internal meatus. Of these the abscess resulting from infection along the auditory nerve will lie the deepest though any of them will be reached within 3.5 cm of the surface of the cerebellum.

At times the abscess will result from necrosis of bone in the mastoid portion or along the petrous portion near the mastoid. In such cases the abscess should be near the diseased bone.

The greater part of otitic brain abscesses result from chronic infections of the ear, though by no means all of them.

The symptoms of otitic brain abscess depend on the location of the abscess to a large extent. They may be divided into general and localizing. The general symptoms are the result of increased intracranial pressure, of meningitis and of infection.

Headache, choked disc and slow pulse may be ascribed to increased intracranial pressure, fever and leucocytosis to the infection, and rigidity and changes in the spinal fluid to meningitis. Nausea and vomiting, changes in the reflexes, stupor and pupillary changes are the result of a combination of these causes.

The localizing symptoms of abscess in the left temporo-sphenoidal lobe are first and most important loss of the memory of names. Wernicke's hemianopic pupillary reaction is an important sign when it can be obtained. Pain and injection in the eye of the same side are also of

*Read before the Chicago Medical Society, March 23, 1921.

importance as is also pain on percussion over the affected area. When the abscess is in the right temporo-sphenoidal lobe the loss of memory for names is not observed. Possibly it may be found in a left-handed individual, but I have had no chance to see such a case. The other symptoms of hemianopic pupillary reaction, pain and injection in the right eye and localized tenderness on percussion over the abscess may be found.

In cerebellar abscess nystagmus is apt to have to have been present at some stage. Past pointing on the affected side occurs, i. e., if the abscess is on the right side there will be past pointing with the right hand even though the right labyrinth be not involved as in one case on which I operated. If the infection has traveled along the auditory nerve facial paralysis may be present on the same side. Here again localized tenderness on percussion may be found over the abscess.

The diagnosis of otitic brain abscess must be made on the following points:

1. The presence of the exciting ear suppuration.
2. The general symptoms of brain abscess already given.
3. The presence of localizing symptoms pointing to abscess on the side of the diseased ear.

The treatment is always operative in spite of the report of one case from the Mayo clinic of a spontaneous recovery. Such a result must occur so rarely that it should not be expected.

In a disease that kills so certainly if left to itself one should not wait for the abscess to become chronic and encapsulated.

The route for drainage should always be that along which the infection has traveled in causing the abscess. The original infection should be cleared up and this usually means a radical mastoid operation. If the abscess is in the cerebrum the tegmen should be removed over an area at least 2 cm. in diameter. The dura should be incised by a cross cut and the brain explored in an upward direction for two cm. if pus is not found first.

If the abscess is in the cerebellum the sinus should be well exposed during the mastoid operation. If there is room enough in front of the sinus to explore, this is the location of choice. If there is not room enough the bone must be removed behind the sinus and exploration made

from this direction unless the sinus is thrombosed, obliterated or sloughed off, when exploration may be done directly through the sigmoid sinus. In any event the direction of the exploration should be towards a point about one cm. posterior to the internal auditory meatus and it should extend as far inwards as the internal auditory meatus unless pus is found first. Exploration may be done either by means of a pointed hemostat, an explorer composed of two thin flat blades which may be separated or by means of a long narrow knife which is to be turned on its long diameter to evacuate pus.

Having found the pus, evacuate and place a rubber drain into the cavity without irrigation, wiping out the cavity or otherwise mauling the brain. Keep this rubber tube open and shorten it gradually until the cavity has healed out from the bottom.

If the abscess is operated on in this way it will not be necessary to wall off the meninges with a cofferdam.

Otitic brain abscess belongs in the field of the otologist because it ordinarily requires the radical mastoid operation to get rid of the source of the infection and because operation along the lines I have laid down has a lower mortality than when a separate trephine opening is made in a region where there is no matting of the meninges together. Besides no unsightly decompression bulging is left with its accompanying headaches.

25 East Washington St.

DICHLORAMINE T TREATMENT OF BURNS.

FRANCIS PARRIER HORAN, M. D.

EVANSTON, ILL.

Scalds and burns are two injuries that may be discussed together. Scalds are apt to be more extensive, because the clothing diffuses the fluid over a greater area and the hairs remain while in burns these are destroyed and the tissues are often deeply involved. Concentrated acids and alkalis resemble burns rather than scalds.

The old classification of Dupuytren needs revision since the introduction of modern methods of wound dressing, so far as prognosis goes, although if asepsis is not secured and maintained in the more severe cases, the old rules will still hold good. For practical purposes only

three classes of burns and scalds need be made, first degree, second degree, third degree.

First degree burns are those presenting erythematous inflammation of the skin without vesication.

Second degree burns are those in which inflammation of the skin results in the formation of vesicles and bullae.

Third degree burns are those in which partial or complete carbonization of the part results, or in which from the secondary effects of the inflammation more or less extensive and deep sloughs form.

Death when it occurs, results early from shock, or vasomotor paresis, or from congestion going on to inflammation of pulmonary or gastro-intestinal mucosa or serous membrane. Of course if suppuration has developed death may be due to septicemia, pyemia, erysipelas, tetanus, etc.

The mere reddening of two-thirds of the cutaneous surface will almost inevitably result in death.

Also the slight burns of the third degree may be fatal, depending on the age, sex, previous health, etc.

Symptoms of burns are local and constitutional. The pain may vary from moderate burning to intense agony, the most painful variety of burns being that in which the anterior layers of the skin are destroyed, exposing the nerve endings.

The constitutional symptoms vary from a slight fever in burns of first degree to profound shock in the deeper forms, followed by reaction and this succeeded by congestion or inflammation of the viscera, and death from cerebral coma.

The local treatment of burns in the past and at the present time are many and varied. The saturated solution of sodium bicarbonate, normal salt solution, boric acid compresses, Senn's powder, hydrogen peroxide sprays, picric acid, carron oil and melted paraffin that is sprayed on the burned surface. All of the above have many advocates and few advantages. Carron oil is one of the popular and frequently used local applications. It allays pain but it is a filthy preparation and its use is apt to be followed by pus formation.

In my experience the most satisfactory local treatment of burns is by the use of DiChloramine T. Since leaving the army I have had a num-

ber of very severe burns which I have treated with DiChloramine T without a single area of infection and they all made an uneventful recovery.

The entire burned surface of the patient is sprayed with a 2 per cent. solution of DiChloramine T. There may be a slight tingling sensation for a couple of minutes after which the pain will almost entirely disappear. In some cases following the DiChloramine T application I spray the surface with Parresine and cover the entire area with large compresses. In many of the cases I have not used the Parresine at all, but instead where extensive destruction of tissue has taken place I simply use compresses soaked in DiChloramine T directly to the part involved. The dressings are changed daily. The advantage of DiChloramine T is that it is an antiseptic and that it keeps its antiseptic properties for 24 hours and has an oily base which permits the dressings to be changed with perfect comfort to the patient. In most of the other treatments of burns the dressings are so severe and the suffering to the patient is so intense that many times the patient has to be put to sleep before the dressing can be completed.

DiChloramine T is dissolved in chlorcosane, which is a chlorinated paraffin wax.

After several dressings with DiChloramine T, no infection having developed, when granulations are beginning to appear, I cover the area which has been sprayed with DiChloramine T with vaseline compresses that have been aseptically prepared. The vaseline compresses are 91 parts vaseline, 6 parts paraffin and 3 parts resin.

If there is a great destruction of tissue or an unfavorable cicatrix I do a Davis pinprick skin graft. Before attempting to do a skin graft I see that the area that I am going to graft is surgically sterile by the use of bacterial counts.

The Public Health Committee of the New York Academy of Medicine desires to emphasize the fact that the principles of Chiropractic and the understanding on the part of Chiropractitioners of the cause of communicable disease are so completely at variance with the principles of medical science as to constitute a menace to the public health. By legal recognition of the Chiropractors, the public might be led to believe that the practitioners are capable of offering competent treatment.—*N. Y. S. J. of M.*, March 3, 1921.

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AUGUST, 1921

Editorial

ILLINOIS STATE MEDICAL SOCIETY OPPOSES SHEPPARD-TOWNER MATERNITY BILL

So far as we are able to determine the Illinois State Medical Society is the only State organization that appears to have had the foresight to pass resolutions condemning this paternalistic and pernicious form of attempted medical legislation. It is safe to say that ninety-five per cent of the medical profession of the country are against the Sheppard-Towner Bill, yet few medical organizations have adopted resolutions condemning it.

Elsewhere in this issue appears the talk given before the Committee on Interstate and Foreign Commerce on July 18, House of Representatives, Washington, D. C., by Dr. Charles E. Humiston, president of the Illinois State Medical Society. In this article appears also the cross examination of Dr. Humiston by members of the committee. (See pages 131-144.)

We published the article for two reasons. First, for educational purposes to show the character of information desired by the com-

mittee. Second, to stimulate State and other medical societies to get busy in opposition to the bill.

We are satisfied that this bill can be defeated in the Committee providing sufficient opposition is developed to overcome the propaganda of the long haired men, short haired women and the individuals in this country who are believers of the soviet form of government, the foundation schools of philanthropy, sociology and psychology whose proteges and graduates await translation into secretaries, assistant secretaries, social surveyors, sob-statisticians, psychologists, professional philanthopists with the uplift urge.

It is time for the people of this country to wake up and to arrest the "hysteria in public health legislation" which began with Compulsory Health Insurance of Germany, which was brought here by a Russian who never practiced medicine, so far as can be learned, which movement was propagandized by the American Association for Labor Legislation and its affiliated organizations whose interlocking directorates are linked with the Rand School in New York and which was developed and exploited under such names as Health Centres, Community Centres,

Maternity Centres, medical practice (Re-registration) Acts, National Socialization of Medicine (public welfare department), etc. "One cannot get figs from thistles," neither can we expect constructive legislation to proceed from such a source.

DOCTOR! WRITE TO THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, HOUSE OF REPRESENTATIVES, WASHINGTON, D. C.

This Committee has before it for consideration, the Sheppard-Towner Maternity Bill. The Committee will finish consideration of the bill before August 15.

The following is the personnel of the Committee:

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 Walter R. Stiness, R. I.
 John G. Cooper, Ohio.
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 J. Stanley Webster, Wash.
 Carl E. Mapes, Michigan.
 Sherman E. Burroughs, N. H.
 Also write the
 Hon. Medill McCormick, Chicago, Ill.
 Hon. Wm. B. McKinley, Champaign, Ill.

The latter gentlemen are the U. S. Senators from Illinois and, while the Senate has passed the SHEPPARD-TOWNER MATERNITY BILL it is possible that the House may not or, if it does, that it will be so emasculated that it will require re-consideration by the Senate in which case it would be well if your Senators were MADE TO UNDERSTAND the viciousness of the Propaganda and the Propagandists. This applies to your local Congressmen, as well.

THE ILLIONIS STATE MEDICAL SOCIETY HONORED AND A COMPLIMENT PAID ITS PRESIDENT BY THE CIVIC FEDERATION OF CHICAGO.

Dr. Charles E. Humiston, President of the Illinois State Medical Society appeared before the Committee on Interstate & Foreign Commerce House of Representatives, Washington, D. C., on July 18th, as representing the State Society in opposition to the Sheppard-Towner Bill on hearing before said committee. The State Society was signally honored when the great Civic organization recognized the ability of our worthy president when its officers saw fit to send the following telegram:

Chicago, July 18, 1921.

Hon. Samuel E. Winslow, Chairman,
 Committee Interstate & Foreign Commerce,
 House of Representatives,
 Washington, D. C.

In appearing before your Committee against Sheppard-Towner Bill Dr. Charles E. Humiston will represent Civic Federation of Chicago as well as Illinois State Medical Society. We have opposed successfully similar Illinois legislation as unnecessary and are concerned over tendency to extend federal subsidies to local governments as unsound fiscal policy leading to extravagance in local governments, demands for increasing federal aid and greater tax burdens. Please let Humiston read this.

Civic Federation of Chicago,

By Douglas Sutherland,

Secretary.

IOWA DOCTORS PLAN EUROPEAN EXCURSION

DOCTORS FROM OTHER STATES INVITED TO JOIN THE PARTY

Iowa Doctors and friends will make a mid-winter cruise to the Mediterranean and the Orient, visiting the Holy Land. Leaving New York, February 4, 1922, under the chaperonage of Dr. J. W. Cokenower of Des Moines, Iowa, and invite the Doctors of other states to join the party. For further information address Dr. J. W. Cokenower, 306 Utica Bldg., Des Moines, Iowa.

THE AMERICAN GYNECOLOGICAL SOCIETY OPPOSES THE SHEPPARD-TOWNER BILL.

The American Gynecological Society, at its forty-sixth annual meeting held, June 2-4, 1921, took the following action regarding the Bill for the Protection of Mothers and Infants commonly known as the Sheppard-Towner Bill. This action of the society was taken, almost unanimously, after careful consideration of a report of its committee on maternal welfare acting jointly with a similar committee of the American Child Hygiene Association.

This Society wishes definitely to state its position for the information of the medical profession and others who are interested in this legislative program.

1. The committee is in thorough accord with the ends which this bill seeks to attain, namely, the protection of the health of mothers and infants.

2. We indorse the coordination of all health activities under one head. We consider the protection of mothers and infants to be a *health measure* of paramount importance to the individual and the state.

3. We oppose in principle the control of health measures by non-medical individuals or boards.

4. We believe in the local control of health activities as distinguished from federal. We approve and indorse the idea of propaganda and investigation emanating from the federal government.

5. We do not indorse the Sheppard-Towner bill in its present form because it does not conform to the above principles and because it embodies the questionable plan of subsidizing state health activities.

6. We endorse the project of establishing a National Department of Health.

REPRESENTATION AT RECENT HEARING OF THE SHEPPARD-TOWNER MATERNITY BILL

In the past two weeks extended hearings have been held by the House Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D. C., relative to the merits of this Bill, and several physicians have given their views to the committee. Those appearing before the committee were as follows:

AGAINST THE BILL

Mrs. Albert T. Leatherbee, Massachusetts Anti-Suffrage Association, Boston. Dr. Charles F. Humiston, President, Illinois State Medical Society, Chicago. Dr. George W. Kosmak, Representing American Gynecological Society, New York. Mr. H. B. Anderson, Representing the Citizens' Medical Reference Bureau, New York. Dr. A. H. Quessy, Fitchburg, Mass. Dr. Charles E. Mongan, Representing Somerville Medical Society, Somerville, Mass.

FOR THE BILL

Hon. H. M. Towner, House of Representatives. Dr. S. Josephine Baker, Director, Bureau of Child Hygiene, Department of Health, N. Y., Dr. Philip Van Ingen, Clinical Professor, Diseases of Children, College of Physicians and Surgeons, New York. Dr. Allen Potter, Director of Division of Hygiene, Department of Health, Harrisburg, Pa. Dr. John A. Ryan, Director of one Department of the National Catholic Welfare University, Washington, D. C. Mr. Edward McGrady, National Legislative Representative, National Federation of Labor, Washington, D. C. Dr. John A. Foote, Professor Diseases of Children, Georgetown University, Washington, D. C. Maj.-Gen. Charles E. Sawyer.

WE WILL BE OBLIGED TO FIGHT PUBLIC HEALTH OFFICERS

The following editorial from the July 15, 1921, issue of the *Indiana Medical Journal* speaks more than an earfull:

We dislike to think it, and yet developments at the Boston session of the A. M. A. indicate that we shall be obliged to fight public health officers, as a class, in connection with the attempt to force Compulsory Health Insurance and State Medicine upon us. Some of the health officers in attendance at the Boston session admitted that they were for State Medicine, and that it was perfectly natural for health officers to support it as it meant a continuance of the official positions and salaries connected therewith. In view of the fact that in a large measure health officers owe their positions to the influence of the medical profession, it seems to us that they should be in better business than trying to foist State Medicine upon us. It is time for a "shown down" on this question of State Medicine, and the sooner we find out who our friends are the better it will be for us and the more intelligently we can act.

ITEMS OF INTEREST IN CONNECTION WITH POLIOMYELITIS.

The disease is not new among us, but has existed under some other designation for many decades. The French called it the "Paralysis du Matin." The English the "Paralysis of Infancy," while in America it has been known as "Teething Paralysis."

The term "Infantile Paralysis" is a misnomer for the following reasons: First, it is not alone a disease of infancy. Second, it is not a paralytic disease *per se*. It attacks adults with equal severity as the young, and if not in as great numbers, certainly with as serious consequences. It is not a disease in which paralysis always attends or follows, but rather one in which paralysis may follow in its more severe attacks. Approximately forty per cent. of those who survive an attack, experience paralysis.

It is not a nondescript disease. It presents a perfectly distinct individuality, with a definite clinical picture and a pathology that runs constant, with definite changes in the spinal fluid, that enable the clinician to make, in conjunction with the symptoms exhibited, not only a diag-

nosis of the disease, but in many cases a reasonably correct prognosis as well. It is not more difficult to recognize by those clinicians who have come in intimate and frequent contact with poliomyelitis than many of our other communicable diseases. It is not a disease that exists only in epidemic form at different seasons of the year and then at great intervals, but poliomyelitis is and has been with us, to some greater or less extent, constantly. Because of the slight symptoms which frequently attend attacks of this disease, it is quite probable, that in the light or abortive forms many of us have experienced an attack of this disease, which has been overlooked but has conferred an immunity for life.

An epidemic of this disease follows the highways of travel, as is the history of all epidemics. Along the line of communication by rail, or water or by the most travelled automobile routes the disease has shown the greatest incidence and in those communities where the opportunities for personal contact are best and most frequently afford the greatest intensity of the disease is experienced.

In the more isolated places no cases at all or only occasional cases are encountered. The greatest incidence as well as the most severe intensity of the disease in the New York epidemic was observed in communities located on bodies of water.

Recent epidemics of poliomyelitis have taught us very little of value as to the epidemiology and treatment of the disease but they have taught the medical profession a great deal, in the early recognition of the disease, and the precautions which may be taken, in some degree, to protect families and communities from infection.

The disease is not one which confines itself to the poor, but people in the better circumstances in life are attacked and the morbidity rate as well as the paralysis rate does not seem to be affected by living conditions. Climate probably has some effect upon the incidence of the disease, because of the habits of the people.

In summer the opportunities for congregating in different places of pleasure and amusement are greater and personal contact is more nearly universal, all of which favors the spread of communicable diseases. But one of the most severe

epidemics of poliomyelitis which Norway experienced was in the depths of Winter.

While the presence of flies is always to be deplored and the existence of insanitary conditions are inexcusable, still neither the presence of vermin, nor insanitary surroundings, seem to influence the incidence of the disease. On the large estates of Long Island where every sanitary method has been instituted for many years, and where environment is as near ideal as it seems possible to attain, poliomyelitis was repeatedly found.

While on Barren Island, which is the dumping ground for Brooklyn, and where practically all of the offal is reduced, where flies and other vermin exist in great abundance and where the living conditions are as bad as can be imagined, still on this Island with its population of about 1,300 people, not a case of poliomyelitis had developed in the New York City epidemic of a few years ago.

Among the children attacked it was repeatedly observed that the great majority were strong, well-nourished and otherwise healthy subjects. Indeed it was but rarely that a poorly nourished child was encountered among these patients. The acromegalic or thyroid or pituitary type of development seemed to predominate.

Only recently has the pathology of poliomyelitis been studied and understood. Our knowledge of the cause of the disease is definite. The micro-organism which seems to cause the disease has been demonstrated.

It is definitely known that the virus is carried with the secretions of the nose and mouth, and man has undoubtedly been incriminated as a carrier of the disease, but in our opinion some other agency or agencies materially assist in causing the disease to become epidemic.

Parasites, animal or fowl transmitters or possibly uncooked food or fruit may be reasonably incriminated in the transmission of this disease and the danger of transmission by dust particles should not be disregarded.

The disease is a *hematogenous* infection. The virus seems to enter the meninges of the spinal cord and the choroid plexus and thence to the anterior horn through the blood stream, causing a meningitis or encephalitis with a consequent edema and cell destruction. The severity of the disease, as well as the severity of the consequent

paralysis depends in no small degree upon the manner and extent to which the virus penetrates the meninges and cord.

The disease presents two phases, a light attack and a more severe one. In the light infection the child becomes ill, is peevish, fretful, insists upon being carried, complains of slight headache, has a temperature of from 99 degrees to 101.6 degrees, is noticeably weak, probably vomits and does not seem to be seriously ill. The reflexes are not lost as a rule, and within a few hours the child is much better, the temperature is normal and the patient appears well. In these cases the virus has not penetrated the meninges.

A spinal puncture would show a clear fluid released without pressure and a negative cell count with little or no globulin. If the parents were told that their child had had an attack of poliomyelitis they would deny it, would refuse to be quarantined or permit their child to be isolated, and yet this patient would be of as grave danger to the community as the patient who has experienced a severe attack of the disease with a resulting paralysis.

The more severe phase shows an exaggeration of all the symptoms above noted with increasing temperature reaching 104 degrees or higher, definite stiffness of the neck with inability to flex the neck or move it without great pain and exaggerated reflexes. The patient is distinctly ill and has the appearance as some writer has described of a "wilted flower." The spinal sign is positive, the invasion of the meninges and cord becomes more positive. A spinal puncture taken at this time will show a heavy cell count. The fluid is released under pressure as a rule, and the globulin reaction is positive.

If taken within a few hours after the violent and sudden onset which characterizes these cases, the cell count will vary from 200 to 2,000 or more. The greater the cell count taken in conjunction with the severity of the symptoms, the graver the prognosis. A low cell count in these cases suggests only a slight facial or no paralysis, while a greatly increased cell count suggest a serious paralysis or death. In cases characterized by sudden onset with severe headaches and positive evidence of severe meningeal invasion with a cell count of from fifteen to twenty-five hundred the outlook is always grave.

The prognosis varies in different epidemics. In the 1916 New York epidemic the mortality rate about equaled the number of those who were seriously or permanently paralyzed. In this epidemic there was a total of 9,000 cases which cost twenty-four hundred and thirteen lives, a mortality of approximately twenty-seven per cent. Of those who escaped a fatal termination it is estimated that three thousand more were paralyzed.

In the epidemic of 1907, there were twenty-five hundred cases in which the mortality was about five per cent.

In another group of seven hundred the mortality was twenty-seven per cent.

The average mortality as estimated in foreign epidemics has been from seven to ten per cent.

The control of this disease lies in its prompt recognition in its mild as well as in its more severe forms. Parents must be educated to pay close attention to even the slight illnesses of their children. They must be taught to seek medical advice and to permit the physician to take such diagnostic measures as seem to him to be justified. If necessary a spinal puncture should be made at the earliest moment, so that no delay in diagnosis be experienced.

Upon a diagnosis being made the patient should be isolated, preferably in a hospital where the patient can be better cared for and greater protection can be afforded the community. The family premises should be quarantined and the contacts should be promptly isolated from the rest of the community.

The prophylactic measures against this disease are simple. The parents should not kiss or fondle their children or permit others to do so. The children should not be permitted to kiss or come into close contact with each other. In the school rooms the children should be separated from each other by the "zone of expectoration or sneezing, and breath zone." As the virus is carried in the secretions of the nose and throat, it is imperative that these cavities be irrigated by some antiseptic solution, *the best and most inexpensive* of which is salt solution made by *dissolving a teaspoonful of salt in a quart of water, and then boiling this solution down to a pint in volume.*

The treatment of poliomyelitis is unsatisfactory. No serum has been discovered the use of

which promises immunity from attack. In the milder forms rest in bed, careful attention to diet and care in keeping the little patient off of his feet while he is ill and for a few days afterwards is to be recommended.

In the severe types the use of immune serum administered in the hopes of neutralizing the virus before it has invaded the meninges or cord, given in 5 cc. doses to the child and 10 cc. doses to the adult, repeated every six hours for two or three doses seems to have undoubted value when given early in the attack and before paralysis has set in will probably prevent paralysis.

Its administration after paralysis has set in is of no value, for the damage which its administration is to prevent has been done and the serum will accomplish nothing at this time. It seems to be of little or no value in these cases characterized by sudden onset with severe headache and positive evidence of severe meningeal invasion with a cell count of from 1,500 to 2,500. These cases seem to be doomed and medication does not improve their condition.

The administration of adrenalin when given with the idea of lessening the edema which the invasion of the virus of the meninges and cord has caused is rationally correct, but the results of its use do not indicate that it has a permanent place in the therapeutics of this disease. The intraspinal administration of human serum is of doubtful value, while the administration of horse or other known animal sera is productive of positive harm.

DANGER IN NEW VOLSTEAD BILL

INDUSTRIES ADVISED TO INFORM CONGRESS OF THE
MENACE

BY BURNELL R. TUNISON

*Secretary, Committee of American Chemical Society
on Industrial Alcohol*

Congress will not pass any legislation crippling American industry if the chemists and manufacturers of the country act at once. But it must be personal and widespread effort if the existing menace is to be eliminated. Recent events at Washington make it clear there has been a general misapprehension about the effects of the Volstead Supplemental Bill and there is a growing disposition by all the fair-minded members of both branches to call a halt upon any legislation which would permit legitimate manu-

facturers to be wiped out of business within thirty days.

The protest made by several sections of the American Chemical Society have served to win the attention of Congress. This was brought about by appeals to the Rules Committee to withhold the granting of a special rule. The effect of the rule would have been to prevent debate and to jam the proposal through both Houses.

Moreover the proposed amendments were generally regarded as designed to prohibit beer. There seemed to be no general appreciation of the fact that the latest proposals to the Prohibition law vitally affected the chemical industry and in consequence all the industries of the country. The "anti-beer" section was used to obscure all the really dangerous provisions.

Due to the courage of Congressman Philip P. Campbell, Chairman of the House Committee on Rules, several public hearings have been held. The Anti-Saloon League was compelled to publicly father and defend one of the most offensive attacks upon legitimate business ever proposed at Washington. It was also revealed publicly that the menace to industries was so real that even leaders of the Anti-Saloon League and similar organizations were sharply divided upon the question of the fairness and propriety of these extreme proposals.

But it may be expected that important officials of organizations like the Anti-Saloon League who have had their way in tests of strength with whiskey and beer makers, will go right ahead with their program and put forth their most violent efforts without regard to the protests of the scientists and manufacturers. This situation involves the gravest problem for the chemists and the industries affected. They may be lulled into inactivity by the reports from Washington that "no special rule may be granted for the Volstead Supplemental Bill."

It is true no gag rule may be approved by the House Committee headed by Congressman Campbell. On the other hand, it is reasonable to suppose that every legislative expedient which experience has taught the Anti-Saloon League will be employed from now on. Pressure will be brought to bear from every section of the country to force Congress to heed the wishes of the Anti-Saloon League.

The duty of the hour for every chemist and every business man, whose field of activity is threatened by the new proposals, is to register a protest against the Volstead menace and all similar proposals no matter who presents them. The Anti-Saloon League will not be idle. They will reach back into various remote sections to persuade the folks at home to spread the alarm about the "Demon Rum." They may make special appeals.

To offset this propaganda of ignorance and prejudice the chemist and business man should personally, and at once, get in touch with his Congressman. The members of Congress have made it clear they want the facts, they want to know what their neighbors think of the pending proposals, particularly the new

Volstead Bill. They will not vote to destroy the means of livelihood of their neighbors if they get the facts.

Protests should be sent by wire or letter at once to the Representatives in Congress from the districts wherein the manufacturers reside if they are to be most effective.

The American Chemical Society has appointed a special Committee to represent it in connection with legislation. The Committee has appeared before Congressional hearings and has tried to make clear how dangerous the pending legislation is to legitimate industry. Dr. Martin H. Ittner, Chairman of this Committee, at latest hearing opposed the proposals from start to finish on the ground that they were wholly objectionable and not subject to any satisfactory modification or amendment. This opposition appeared to be effective, but the Chemists' Committee needs the active cooperation and support of the entire industry.

Copies of the pending bills may be obtained from any members in Congress or of the Senate, or from the Secretary of the American Chemical Society Committee on Industrial Alcohol, Burnell R. Tunison, Chemists Club, 50 East 41st Street, New York City, N. Y.

OBJECTIONS TO THE SHEPPARD-TOWNER MATERNITY BILL

REMARKS IN OPPOSITION TO SAME BEFORE THE HOUSE OF REPRESENTATIVES

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE
Washington, D. C.

By Chas. E. Humiston, Chicago, Ill., President Illinois State Medical Society.

Monday, July 18, 1921.

The committee met at 9 o'clock a. m., Honorable Samuel E. Winslow (Chairman) presiding.

The Chairman: Gentlemen of the committee, if you will kindly come to order, we will proceed with the further consideration of H. R. 2366. The Chair will ask Dr. Humiston of Chicago to appear before the committee.

STATEMENT OF DR. CHARLES E. HUMISTON,
President of the Illinois State Medical Society,
Chicago, Ill.

The Chairman: Doctor, will you kindly give your name, your residence, and any representation which you may have, and then proceed in your own way. Will you care to be interrogated as you go along?

Dr. Humiston: Mr. Chairman and members of the committee: My name is Charles E. Humiston; my home is Chicago, Ill. I am president of the Illinois State Medical Society and I appear before your committee in my official capacity representing the wishes and the declared attitude of the State Society, and, likewise, I come as a citizen of Illinois to convey to you the attitude of the people of that commonwealth on this particular bill. I am also authorized to represent the Civic Federation of Chicago. I trust I may be pardoned if I confine my remarks, or endeavor to, to the bill now under consideration.

I wish to say in the beginning that the title of this

bill meets the hearty approval of every right-thinking person. We have no quarrel with the object of this bill, but we do have with the method which it sets up.

I do not know to what extent I shall be permitted to encroach upon your time. I desire to be brief and shall attempt to do so, and I would like to be interrogated not here and there through the few remarks I shall attempt to make, but rather when I have, in a measure, finished what I wish to present, if that is agreeable.

The Chairman: Quite so.

Dr. Humiston: First of all, as to the people of Illinois represented in the General Assembly. The Legislature which has just adjourned had introduced therein a number of bills—three, I believe, having a direct bearing on this so-called Sheppard-Towner bill, and the Legislature rejected them. I know of no way, aside from a referendum, of getting at the sentiment of the people better than through the acts of their accredited representatives. The Illinois State Medical Society, of which I have the honor to be the president and chairman of its legislative committee, has time and again taken action on matters of this kind, and definite action on this particular bill, in that it antagonized it in the Legislature of our state.

Now, the reason of this—and I do not wish to be misunderstood or cross-examined with the idea in view that the medical profession in any way antagonizes the purpose—it is this *bill* which we wish to oppose. There are a number of very definite reasons why the Medical Society, representing more than 7,000 members in Illinois, is opposed to the terms of this bill. One of them is because it uses the practice of medicine as a doorway for the central government to invade the police power of the states under which the medical practice acts of all states are had and operate. I say that this bill interferes with the practice of medicine for this reason: It appropriates money for the instruction of the people of the various states in hygiene, in maternity and the welfare of babies. That of itself is doing indirectly what our form of government forbids to be done directly, supervising the practice of medicine, which is delegated, and really belongs, to the states. It does it in this way: The money which, of course, is collected from the states, as we have no other way of getting money in this country, except by taxation, and the people pay it, the money which is available and the funds which are to be had under this law cannot be obtained by the different states until the proper body in the state complies with the terms laid down by the Children's Bureau in the Department of Labor. Now, that practically says to Illinois, "If you wish any of this money to spend, make your terms to suit us. If the terms do not suit you cannot have it." The argument is advanced, if you do not want it, do not take it. That I would not object to if it would also say, "If you do not want this money you need not pay any taxes into this fund." We cannot help being taxed, and I wish to say right here, in passing, that further taxation is perilous to the condition of things in this country. I

travel somewhat widely and meet many people, and I find that the attitude of the public is sullen, resentful and suspicious. The people feel that they are being overtaxed; that their money has been wasted, and they resent anything that looks like more taxes at this particular time. That is an observation which I have made and which I dare say you will not dispute, and which, in a measure, I feel personally.

The activities contemplated by this bill, I believe to be 95 per cent. medical. The economic and the other phases which have been emphasized are entirely secondary and obscure. The mother and the prospective mother, with her new babe, need the best scientific instruction; not merely non-technical instruction. I do not mean to say they need not have non-technical instruction, but the kind of instruction that those mothers need is of the highest order *technical*, and where would you look for that except among those who have dedicated their lives to acquiring and giving that kind of instruction?

I would say of the testimony given—and I have just gone through about 80,000 words of testimony, and I am glad it is called testimony instead of evidence—presented before a committee in the Senate, that very little of it has a direct bearing on the terms of this bill, and its application; but that testimony presented which on the face of it appears to be convincing consists of statistics from the health department of New York City. The representative, an employe of that department, made effective use of the showing made by the health department and by the public health nurses. The credit is due, of course, somewhere, but it is not due to such a great extent or to any great extent to the health department or to the nurses, as such, but to the medical profession which has dug out and developed this knowledge. The department of health and the nurses applied the knowledge which they gained there.

The oldest baby welfare center in the world is in a country for which many of our young men made the supreme sacrifice. Twenty-six or twenty-seven years ago it was established, and it still exists, or others like it, in that country which we all love and are willing to fight for and have been fighting for, a country in which the people are past masters of the game of avoiding parenthood and where the death rate exceeds the birth rate, where this baby welfare station has existed for 27 years. In that country where the first one was established, they have a death rate of babies of 140; almost double that of a city in this country comparable in size. Now, I am not going to charge that welfare center, nor that instruction, nor the public health nurses, nor the doctors connected with it, with the responsibility for the loss of babies in that country—or for the avoidance of motherhood—as has been suggested before this committee, or at least before the Senate committee. I have as much right, however, to charge those results which follow as the health department of New York City has to claim so great a degree of credit for their activities; but I would be just as unfair as they, though I

do not mean intentionally unfair on the part of these representatives of the different interests and municipalities, I charge no unfairness and detect none anywhere, but I believe there is a prejudice. I apply the simple rules of evidence. I believe it is prejudice. The figures cannot fairly be attributed to the nurses nor to the teachings.

This is a medical question, it is supervising the practice of medicine in the different states through a Children's Bureau in the Department of Labor that this bill provides. That is why we object to it. We object to this—and when I say “we,” I mean the doctors of Illinois, and I might just as well say the doctors of the American Medical Association in this wider sense, because at their meeting in New Orleans a year ago a resolution was passed by the House of Delegates condemning every form of state medicine. Direct action on this particular bill has not been taken, I regret to say. I regret to say that a chance was not afforded at the Boston meeting. It was a serious oversight on my part as a member of the House of Delegates that I did not introduce a resolution against it, but if I live until the meeting in St. Louis in 1922 and if there is any use, and I think there will be, of introducing such a resolution, it will be presented there for action next year by the American Medical Association.

Now, we object to placing the practice of medicine or any part of it under the supervision of a lay board. We object to any form of state medicine, whether it is this or any other, and that answers the question you might ask, if we amend it thus and so. We are opposed to this bill root and branch. It is wrong in principle. The central government has no proper activity in this field. We object to this excursion into Socialism. It is not only advice with reference to hygiene that this question covers, that is, the question of the mortality of mothers and their babies. It is a question also of food and raiment. The bills from foreign countries referred to and quoted, provide something very similar to that. I take it this is the opening wedge for the same kind of benefits in this country. While the amount of money here may not seem large, it is small for the purpose, too small to accomplish the object, but it is a beginning. It will never be smaller. If it were brought up to the ideals of the sponsors of this bill, it would be \$1,000,000,000, or more, instead of \$1,480,000.

A doctor in Illinois is not able to practice in Indiana unless he is licensed by that state. Neither can he go into Virginia until Virginia bestows upon him the right to follow his life work. I think we have a right to complain of that, but under our form of government it must be so. The doctors are licensed by the several states; the general government cannot license a doctor to practice in the states.

Statistics have been quoted more or less effectively. The fact is that this case rests upon the showing made by the statistics. I wish to take issue with the statistics. The statements made by the proponents of this bill are unjustified. We have not statistics that are reliable to base any such positive statements upon, and

to show how they vary, when this bill was written, the mortality of babies was 100, but before the sponsors of the bill could get to it, somebody else found that the same authority, the census, shows only 87. Reliable statistics cannot be had. They ought to be available. Our birth registration areas should be developed. I would not object to that effect of this bill if it has any such possibility, but the side effects which should be taken care of by the states and which are being taken care of by the states very much overshadow that one effect. Forty-five of the states have passed enabling legislation for better birth registration. It is being taken care of by the states, and it should be, and the medical profession asks that you contribute your decision to seeing that this whole matter be taken care of there. We ask the committee to hand this question back to its proper parents, the states; this baby question which we love better than almost everything else in the wide, wide world, we wish properly taken care of. The admonition may be given to the states to take care of it better than it has been done. It is closer to our hearts than almost anything else, but we believe that this bill will not go very far toward accomplishing the objects for which it is designed.

I could go into details further as to why the doctors object and show that visiting nurses responsible to authorities other than the doctors in attendance may and do cause friction. As a physician, and I claim to be one of the kind that carries a grip, and to represent the rank and file of the medical profession, I come here to antagonize the views of some doctors from health departments whose compensation is money raised by taxes and whose work is within narrow limits. They are honest, but they are prejudiced. I do not blame them for wanting more money, and the health departments of the various states where they have very little money would like to see something more gotten probably from the central government; but states like Illinois that pay more than they ever get back in taxes have the right, on the same basis, to object.

The nurses would work under a lay director responsible to the bureau in the Labor Department here, indirectly responsible, but nevertheless responsible. Give me the power to say to the Department of Health at Springfield, through its Children's Department, "Make your regulations suit me or you get no money." I would inspect the regulations and would say, "Change this," and if it were not changed, no money would be forthcoming. It gives to the Children's Bureau dangerous power over the health departments of the states. As a principle of law, you have no right to do by indirect means the very thing which is forbidden to be done by direct measures.

This is not a prepared speech. I have omitted many things that I could talk about, but I realize what you have had to listen to, gentlemen. I realize that this is the most widespread and popular lobby that probably has ever visited this city. Every employe about the government buildings of whom I made inquiry where I might go to find this committee, when I mentioned

the magic words "maternity," said, "Oh, maternity," and knew right away where to send me. It is talked about everywhere and I agree with the sentiment that makes people talk about it, but I ask you gentlemen, in the name of the people of this tax-ridden, groaning population, not to saddle any taxation further upon the people at this particular time, and, certainly, do not do it under a bill of questionable value and one which those in position to know the most about it, are opposed to and, 95 per cent. of the doctors of this country, I believe, as a fair estimate, are opposed to it.

Mr. Sanders: Doctor, as a matter of fact, the American Medical Association, after considering various resolutions that were introduced, finally came to this resolution, did they not?

"Resolved, by the House of Delegates of the American Medical Association, that it approves and endorses all proper activities and policies of the state and federal governments directed to the prevention of disease and the preservation of the public health."

Dr. Humiston: It did. It adopted that very thing at Boston. Dr. M. L. Harris, of Chicago, worded that resolution, and the question was asked, why not have that in the negative and say that we do not endorse anything except those activities strictly covering the general purposes of hygiene, sanitation and so forth, such as the prevention of yellow fever and the great accomplishments which this country, through its department of public health and the Surgeons General of the Army and the Navy, have accomplished, but Dr. Harris said, "I prefer to state a thing in the affirmative rather than the negative," and that is why it stands in that way. I was there and helped to pass that resolution. It was in response to resolutions from five states, Illinois, Michigan, New Hampshire, Massachusetts and New York, in which the terms used varied very little, all denouncing every form of governmental activity either by subsidizing health centers or anything like it. The resolutions were intended to put the different states on record against any form of health insurance or compulsory health insurance, or health centers subsidized by the state or national governments, and they certainly included things like this.

Mr. Sanders: As a matter of fact, the resolution does not condemn anything, does it? It approves and endorses activities and policies, amongst others, of the federal government, directed to the preservation of the public health, and also, in the same resolution, the prevention of disease, so that it goes not only to the prevention of disease, but the preservation of the public health.

Dr. Humiston: That we endorse, but I claim that this bill is outside of what that resolution comprehends. I helped to pass that resolution, and I know what it means, and I know what the House of Delegates meant when they passed it. It was a compromise trying to cover the ground and to get something of that kind through. It did not contemplate this or anything like it. It is, however, very indefinite.

Mr. Sanders: This is what I find in the organ of

that body. I am going to skip part of it and only read the part that refers to this:

"The committee has very carefully considered the various resolutions and so forth, has given free hearing and careful attention to those interests and has carefully considered the same and begs to report a substitute for all resolutions the following," and then follows the resolution which I just read, which is not a condemnation of any activity of the federal government, but is a specific endorsement of the activities and policies directed toward the preservation of public health, and this was in June of 1921.

Dr. Humiston: I know. I was there and I am willing to admit it was a sort of straddle—getting out of a very embarrassing situation, because there were members there, representatives of the health departments of several states, whose names I need not mention, who were on these committees and who were in favor of these things. There was more or less of a compromise; but if you wish to introduce that at all, there is an editorial in these records from the Journal showing the policy of the Journal. Please go back another year to New Orleans where every form of state medicine is unqualifiedly condemned, and this I claim to be one form of it.

Mr. Sanders: As a matter of fact, at the New Orleans meeting about a year ago, they undertook to pass a resolution condemning this bill and the resolution was not passed. Is not that a fact?

Dr. Humiston: I have not heard of any such resolution. The one I am speaking of did pass. Unfortunately, I was flat on my back in bed and was not able to be there and I cannot give you first-hand information, but I know they did pass the one I refer to.

Mr. Johnson: Mr. Sanders, what were you reading from?

Mr. Sanders: I was reading from the Journal of the American Medical Association, a report of the meeting—

Dr. Humiston (interrupting): Of the House of Delegates at Boston in June, just passed.

Mr. Sanders: In June, 1921.

Dr. Humiston: I would like, if they are not in the records, to have these editorials put in. There are two of them in the Journal showing the policy of this organization. I will not say who wrote them, but they are from the editorial department.

The Chairman: Do you wish to enter those editorials as a part of your testimony?

Dr. Humiston: Yes, there are two editorials.

The Chairman: Can you identify them?

Dr. Humiston: They are not in that particular Journal. I would like to look up the files of the Journal and get the citations.

The Chairman: Can you furnish them to the committee?

Dr. Humiston: I can do that, yes sir. Here is one of them.

The Chairman: Will you read it?

Dr. Humiston: I will leave it with the committee.

It is already in the record of your Senate Committee proceedings.

(The matter referred to is as follows):

FEDERAL CARE OF MATERNITY AND INFANCY: THE SHEPPARD-TOWNER BILL

As announced in a recent issue,¹ the Sheppard-Towner bill, providing for the "public protection of maternity and infancy," passed the Senate, December 16. In the House, it was referred to the Committee on Interstate and Foreign Commerce, which on January 25 reported it out with several amendments. The bill, as it now stands, appropriates \$1,480,000 annually for "promoting the care of maternity and infancy in the several states; to provide instruction in the hygiene of maternity and infancy," and for "making such studies, investigations and reports as will further the efficient administration of the act." It authorizes the Children's Bureau to form an advisory committee consisting of the Secretary of Agriculture, the Surgeon-General of the Public Health Service and the Commissioner of Education. The bureau is authorized to expend 5 per cent. of the appropriation for administration purposes, to pay \$10,000 annually to each state for administration expenses, and to apportion the remainder to the states in proportion to their population, provided each state appropriates an amount equal to the amount it receives. In any state having a child welfare or child hygiene division in its state health agency, the state health authorities shall administer the act. The state health authorities shall submit to the Children's Bureau a detailed plan for administration and "for instruction in the hygiene of maternity and infancy through public health centers, consultation centers, and other suitable methods."

All will agree that the objects sought, namely, the care of maternity and infancy, and instruction in the hygiene of maternity and infancy, are in the highest degree commendable. There cannot be too much knowledge or too much instruction of the right sort on such vital subjects. There are, however, serious objections to the methods proposed.

The bill provides funds through the apparently popular method of federal state aid, i. e., the appropriation of a large sum of money from the federal treasury to be prorated to the various states, provided the state appropriates an equal amount. Bills are now before Congress providing similar methods for the development of physical training, for improvements in education, for the treatment of venereal diseases and for other projects, all good in themselves, but activities which belong to the state and local authorities. It is not strange that this method has become popular with those who have pet measures to advance. It has the advantage of simplicity. It is only necessary to induce Congress to appropriate a certain sum to be divided among the various states. This prospective grant is then used as an inducement to the states to appropriate equally large sums. The advocates of this plan apparently regard the federal treasury as an inexhaustible reservoir, entirely overlooking the fact that such increasing appropriations will necessitate heavier federal taxes to be matched with heavier state taxes, all of which must be paid eventually by the common citizen. That the so-called federal aid plan is economically unsound has already been pointed out by some of our leading financial authorities.

Another objection is centralized administration. How would the proposed plan work out? Some state, say Minnesota, would receive \$10,000 for administration expenses, with its additional pro rata, probably \$30,000 in all, provided the legislature appropriated \$30,000. This would give the state department of health \$60,000 for maternal and child welfare. Splendid! But it could not expend this sum, one-half of which is its own money, until its plans had been approved by the Children's Bureau in Washington.

The care of mother and child is a state and local, not a federal function. All will agree that every mother and child should receive proper care. So should every mother and child receive suitable nourishment. But it is not the function of the federal government to provide either food or care. There are certain public health functions which are clearly

1. Senate Passes Shepard-Towner Bill, General News, J. A. M. A. 76:321 (Jan. 29) 1921.

national in character; others which should be performed by the state, and still others which belong to the local government. As pointed out by Dr. Billings in this issue, the rational method of providing proper care for the individual is through voluntary self-taxation of voters in a political unit to pay for the necessary local facilities for the prevention of disease and the promotion of health. While this may seem slow as compared with the more popular plan of securing an appropriation from Congress, it is the method by which our public health machinery in this country has been developed, and is the method which will yield the most satisfactory results in the long run.—Journal A. M. A., Feb. 5, 1921.

THE SHEPPARD-TOWNER BILL

As stated in our news columns, the Senate Committee on Education and Labor, May 20, reported favorably on the Sheppard-Towner bill. This bill, considerably amended, now provides for the appropriation of \$1,480,000, \$10,000 to be paid to each state and \$1,000,000 to be apportioned among the states in proportion to their population, no part of the prorated amount to be paid until an equal sum shall have been appropriated by the legislature of the state for the purposes provided for in the act. The Children's Bureau is made responsible for the administration of the act; the chief of the Children's Bureau is directed to form an advisory committee consisting of the Secretary of Agriculture, the Surgeon-General of the United States Public Health Service and the United States Commissioner of Education. Not more than 3 per cent. of the total appropriation may be used for administration expenses. Any state desiring to avail itself of the benefits of the act must submit to the Children's Bureau a detailed plan for instruction in the hygiene of maternity and infancy through public health nurses, concentration centers and other suitable methods. To meet the objections of the advocates of personal liberty, an amendment provides that no state official or agent or any of the employees of the Children's Bureau shall have the right to enter any home over the objection of the parents. The report of the committee is practically the same as the report of the Senate committee on the same bill in the last session of Congress. It repeats the statement that the United States stands seventeenth among civilized nations in its maternal death rate; that most of this loss could be prevented by proper prenatal instruction, and that the bill has the unanimous approval of women throughout the country. As stated in a previous issue, THE JOURNAL does not favor this measure, since: (1) the principle of federal state aid as a means of financing public health work is an unsound financial policy; (2) public health work, except those activities which are clearly national in character, is essentially a function of the state and local government and should be paid for out of state and local funds; (3) no such emergency exists as has been claimed, and there are no reliable statistics by which it can be proved that the United States stands seventeenth in maternal death rate; (4) the means provided in the bill will not afford an effective remedy for existing conditions, and (5) and most important, if the federal government intends to inaugurate activities for the care of maternity and infancy or for any other public health measure, such work should be placed in the hands of the United States Public Health Service rather than under a bureau of the Department of Labor.—Journal A. M. A., May 28, 1921.

Mr. Mapes: Doctor, can you specify a little more in detail in just what way you think this bill would invade the jurisdiction or province of the medical profession?

Dr. Humiston: Yes, sir. This bill, in order to apply to a state at all, specifies that the Children's Bureau shall make specific rules which must be complied with. In other words, the health department, or the children's departments in the various states must obey the rules of a central power here in Washington. I would make the further statement that this is a medical question, and, consequently, it cannot be separated,

because, whatever the supervision, it is there just the same, or it is a supervision over what is done in the state, over what is done, for instance, in Chicago.

Mr. Mapes: Your motion would be that whatever supervision the doctor must have should be through the public health officials of the state?

Dr. Humiston: It should originate in the states, just the same as the license and everything else concerning the practice of medicine.

Mr. Mapes: Is it your motion that this bureau would have any control over the individual practitioner?

Dr. Humiston: With an employe responsible to this bureau indirectly, but responsible all the same, visiting the same patients as I visit as a physician, I think it would be interfering with my business.

Mr. Mapes: Under the provisions of this bill, will any one be compelled to visit your patients?

Dr. Humiston: No, sir; they are not compelled to send some one, and neither am I compelled to make calls when I am sent for, but the fact of the business is, this subject is so intensely interesting, being the biggest thing on earth, where there is anything of this sort done, women will seek information. They ask their neighbors for information. Of course, there is need for this sort of instruction, but it should not come from any but competent sources.

Mr. Mapes: Do you recognize any field between no instruction at all and that which the patient gets through employing an individual doctor?

Dr. Humiston: I am not quite clear as to what you mean.

Mr. Mapes: Do you recognize that there is anything to be done for the general public or for the expectant mother that cannot be done except through the individual doctor?

Dr. Humiston: Certainly, there are proper activities for the Department of Public Health, under whatever name it is operating. There are proper activities for them, and the medical profession is perfectly willing to co-operate with them. Then, there are points of natural antagonism. There are points of activities that are found to meet. Doctors cannot have everything they want in the practice of medicine, and the public health authorities here and there must encroach upon them. Certainly there is a place for this instruction, but what we object to is that the Children's Bureau takes over *health matters* and undertakes to supervise a question which is *essentially medical*, and which, without medical knowledge back of it, makes the supervision worse than useless.

Mr. Mapes: Perhaps I have asked this question in a different form. Do you think that this bill or the provisions of this bill would apply to those people who are able to have and who do have a family physician, or who employ a doctor?

Dr. Humiston: Yes, I can only gather the effect of the bill from the way in which it is written. Just what those people who got this bill up had in mind would have nothing whatever to do with its application. It says in Section 10 that anybody who asks for

it can have this assistance, and that means that the whole population is free to share in its benefits, if it has any benefits. I do not understand that it is limited to poor people or to people who have no physicians. It is a fact that well-to-do mothers will go to these baby centers and get information which they do not assimilate or understand, information that they are not competent to understand, and they often take issue with the family doctor. Now, it may be that sometimes they are right and have better information than the family doctor can give, but for the most part, they are wrong, and there is strife stirred up by the center. I claim for the practice of medicine—for the medical profession, that it has a right to exist under the very best conditions, because we are all interested in that, and whenever the practice of medicine becomes in any way impaired through legislation or other means, the country is bound to suffer.

Mr. Mapes: Are you opposed to those infant centers or clinics?

Dr. Humiston: If you will pardon me for confining my attention to *this bill*—

Mr. Mapes (interposing): My question was asked because of the statement you made that women who could afford doctors went to the centers and got notions that were in conflict with the views of the doctors.

Dr. Humiston: Yes, sir, and my knowledge of that comes from experience in a medical body that has to adjust and adjudicate those things. Where they are under the supervision of the local medical profession, those things are smoothed down and properly taken care of. When those things are taken care of by public health nurses, who are responsible all the way back to the City of Washington, or to the general government, the local medical authorities would not have anything to say or do except to get out of the way of the steam roller.

Mr. Mapes: You do not say whether, or not, you are opposed to the centers?

Dr. Humiston: I am opposed to the centers which this bill provides. Now, if you want my private opinion about other things, I will give that to you privately, but I am now talking about this bill, and we are opposed to it for the reasons I have given.

Mr. Mapes: I do not care about getting your opinion upon anything upon which you do not care to express it, but you have expressed an opinion on the centers that now exist. If you do not care to express an opinion, I will not ask you to do so.

Dr. Humiston: Let me answer your question. I have been a medical teacher for many years, and I hold the chair of Professor of Clinical Surgery in the College of Medicine of the University of Illinois. We maintain dispensaries at places where we give out this kind of information, and I do approve of that. I help in my feeble way.

Mr. Mapes: Do you think this work should be done under the guidance of the medical profession?

Dr. Humiston: Yes, sir; I do. I will be perfectly frank with you about that. It is the *practice of medicine*, and I say that I believe the practice of medicine

belongs among the licensed medical fraternity, or whoever the states through their representatives care to license. They only are legally qualified to do it and should be permitted to do it. Every one else should be required to take orders from that source. If there were no other objections to this bill I would object to putting maternity matters for sentimental reasons, under a department which originally was created to investigate the conditions of children in industry. I would object to putting it there for sentimental reasons solely because the head of that bureau happens to be a woman, and upon the theory that it is a woman's question. It is no more a woman's question than it is a man's question. I, as a father, have six extremely good reasons for being interested in this question, namely, Margaret, Homer W., Ruth, Charles Edward, Jr., Helen and Baby Jean. I have as much interest in them as has their mother, the most divine woman I know on the face of the earth.

Mr. Mapes: I think it would be generally conceded that it would be desirable for any expectant mother to have a doctor, and that doctor would probably take care of her, but do you think that the medical profession as a whole is very prone to impart information even to their patients so that they can take some precaution?

Dr. Humiston: Precautions against what? Babies?

Mr. Mapes: Precautions in the way of doing what they should do when preparing or getting ready for the baby.

Dr. Humiston: I would be ashamed of any member of the medical profession who would not be glad to impart any useful and wholesome information to any woman under those circumstances. The medical profession stands for that, it has been in favor of it, and is doing it.

Mr. Mapes: That is your own experience?

Dr. Humiston: That is my observation, and it has not been very limited either. The organized medical profession, the American Medical Association, has distributed more than three million pamphlets on the subject of maternity.

Mr. Mapes: I understood you to say that you were in favor of the purposes of this bill. Is this correct?

Dr. Humiston: For the protection of maternity and infancy, and that is where I stop. That is stated as the purpose of the bill. I take issue with the way in which it is contemplated that it shall be done. I am in favor of leaving this to the states, where it belongs, and I say that this bill ought to be killed in committee, or, if it must come out, it should be put to sleep at the bottom of the calendar.

Mr. Mapes: You say that you are in favor of giving protection to women and infants. In just what way would you do that? Would you leave it entirely to the private initiatives of the medical profession?

Dr. Humiston: I would leave it to the states to provide charity to those who require it, and I would leave the practice of medicine to the practitioners of medicine, and when those instrumentalities fall short in any state, let the state devise other ways. I think there is coming to be more and more publicity of in-

formation in health matters and that is a very proper activity. There is more and more publicity from medical quarters and from medical sources as I have already stated. We are progressing in that respect, and no doctor who is worthy of the name of physician objects to having an intelligent patient instructed.

Mr. Sweet: Let me see if I understand your position. As I understand you, the matters involved in this bill are wholly matters for the medical profession?

Dr. Humiston: Ninety-five per cent. I gave as the figures and I am willing to stand on that. That shows the preponderance of it.

Mr. Sweet: That applies as well to the state as to the federal government?

Dr. Humiston: The states are not owned and controlled by the physicians, but the physicians are the creatures of the state. The state retains its authority to deal with them as it pleases.

Mr. Sweet: I realize that, but I am trying to get at your thought in regard to this matter, not so much your position on the bill itself, but your view as to the whole situation as a medical matter, or, at least, as something that is touching upon the medical profession; that is to say, instead of having a separate organization, you believe that it should be a part of the medical administration of the state. You believe that it should be a part of the medical administration of the state, instead of a separate administration of this subject?

Dr. Humiston: That states it very well. Without attempting to define what part of it could be best handled by the state through state employes, I agree with your statement of it. That is what I am trying to say.

Mr. Sweet: Your position is that whatever instruction goes out should, in fact, emanate from the medical profession, under the supervision of the medical profession. Your conclusion is that whatever instruction is sent out or whatever education is imparted should be by well defined methods under medical supervision?

Dr. Humiston: Practically so. I believe that any medical instruction intended for the public as a whole, and which is interstate to the whole country, which is a matter between the states and is national in character, should be taken care of by the Federal Department of Public Health, instead of by the children's bureau or any other bureau under any department; but I believe that essentially all of this belongs to the states and such part of it as can best be administered or done by the state should be done by the departments of health in the various states.

Mr. Sweet: In other words, your position is this, that whatever instruction is given by nurses, or by those who have not been properly licensed by the state, should, in fact, be under the supervision and direction of the medical profession?

Dr. Humiston: Yes, sir: By the municipal health authorities, or state health authorities, the heads of which are *doctors*.

Mr. Sweet: This is in order that the information

that is given may be correct and along proper lines, the information should come from the profession and not from nurses or others who have not made a life study of the question or subject. Is that your position?

Dr. Humiston: Precisely. I think that the best is none too good for any one under such circumstances and the medical profession is the source of our best information. I have had something to do with the education of nurses for many years, and I have the highest regard for what they know and do, but they are not the best persons to give technical information, and this is a technical subject, despite the fact that the bill says something about its non-technical nature. I am frequently asked questions that I am unable to answer, and naturally so, but I can come nearer to answering them than the nurse who has been listening to my lectures for a time, some of whom are likely to be public health nurses a little while later. I believe that any doctor who is worthy the name can give better and safer advice and instruction of a medical nature to prospective mothers than can public health nurses. Some one may have to help these women, those poor women with their babies—that is, advise how to feed them, how to wash them and put on their clothes, and in not a few instances somebody must furnish the clothes for the child's body, where the parents are very poor. Now, where will you stop? Do you wish to legislate and appropriate moneys to supply the needs of those children? Then, let us buy flour, sugar, meat and provide fresh air for those poor mothers. Let us take care of the housing conditions and all the economic questions. Those economic questions are powerful elements. It is not just a question of medicine. That being true, why use medicine as an excuse to invade the police power of the states, when the medical part is taken care of better than most other things?

Mr. Sweet: I presume you have read the testimony, or heard the testimony in regard to the conditions in the City of New York, and as to what is being done there. Would you say that that is being conducted in a proper way?

Dr. Humiston: If you will qualify that word "proper" I will say that they are doing very good work, having in mind the conditions. If that is what you mean by "proper," I say yes, but if you mean that they are not making mistakes, that they are not wasting effort, that they are not doubling on their tracks, etc., I want to qualify it a little. I believe that the health departments of all the large cities are doing good work. I know they are. The issue I take is with the proposition that the good results they are obtaining are any indication of what would be accomplished for the rest of the country if you should pass this bill. There is no parallel between the two things at all.

Mr. Sweet: Your view of it is that the nurses and other agencies should be subordinate to the medical profession in imparting advice and knowledge in regard to the objects set forth in this bill?

Dr. Humiston: I do. I do not recognize the so-

called nursing profession as a profession pure and simple, but nurses are *assistants* to the medical practice in its proper and wide sense. They are carrying out orders, and if you permit nurses to act on their own initiative, then they are practicing medicine, which is in conflict with the laws of every state. I know that they are inclined to do that.

Mr. Sweet: In the City of New York, I believe, they are in a sense considered to be a profession.

Dr. Humiston: In that ordinary sense, I should say that druggists belong to a profession. I do not want to split hair in making these distinctions, but they are not an *independent* profession. They have a part in it under the direction of somebody else, whose instructions they are following out. Now, if this bill is carried further, and if it were put under the head of the Children's Bureau, where would they go for their information? They would have to hire doctors. Now, the practice of medicine is an intensely personal thing, and it cannot be made anything else. So far as the science of medicine is concerned, it is general, but the application of medical principles to an individual in medical practice is a personal thing. It is an art, and the state is no artisan. It cannot do it, and will never learn to do it. There are some great questions of hygiene and sanitation, such as are involved in the handling of yellow fever and malaria, that are proper activities of the government. Those are questions of hygiene and sanitation. The treatment of the sick is a matter for the medical profession; now, if a woman is not sick, she does not need instructions from that source. There has been some mention here of advice in regard to albuminuria. I would like to know how a public health nurse is going to know much about the treatment of eclampsia. If you know of any that can do so, then I would like to hear some of her lectures on the subject. I do not understand that complication of pregnancy very well, but I am satisfied that the medical profession knows more about it than any nurse, and is better qualified to give advice in regard to it than any nurse would be in passing it to a woman who scarcely understands the English language.

Mr. Denison: Of course, the expenditure of funds by the State governments for health purposes is commendable, is it not?

Dr. Humiston: Yes, sir; as an abstract proposition, certainly it is.

Mr. Denison: What do you think of the propriety of the Federal Government contributing a certain amount of money to the different states as a means of encouraging contributions by the state, and, at the same time, not retain the right to dictate control of the expenditure of the money, but leave that to the state? What do you think of the wisdom of that plan?

Dr. Humiston: I cannot conceive of the *contribution* of money by the Federal Government for the encouragement of the states, because the Federal Government has no money except as it raises it by taxation. It has to get its money from the people

of the states. It can only get its money by taxing the people, and it is not getting something for nothing. I cannot see any parallel between this proposition and Federal contributions to good roads and agricultural needs that have been encouraged in that way. I cannot see any parallel between those things at all, but I do see the injustice of taking away ten dollars from the State of Illinois and giving four dollars of it to some other state that does not pay hardly anything. I do see the injustice of that as an economic proposition.

Mr. Denison: If that state that you refer to does not spend any money or contribute any money for the purpose, do you not think that the nation should take cognizance of that fact from the standpoint of not doing anything to help the people of a state who will not help themselves?

Dr. Humiston: I think that the guide to the activities of the Congress of the United States is well laid down in the Constitution, and if these activities come within the lines there laid down, then it cannot be gainsaid that they should be done, but when it comes to doing it in the way which I think is contemplated in this bill, then I think I should raise my voice against it.

Mr. Denison: I am not trying to get at that, or as to what this bill does. You seem to take exception to the fact that the Federal Government should take control through this Bureau and have the right to make the aid granted the state conditional upon the state accepting the terms imposed by the Bureau. Now, suppose the Federal Government should simply make an appropriation as a matter of encouragement to the state; to induce them to make similar appropriations, without retaining any control over the manner in which the funds are to be expended. Do you think that would be commendable, or would it be subject to criticism?

Dr. Humiston: I cannot conceive how you could do that without maintaining some sort of control over the money that is contributed, and that means some sort of political machinery. If you want to make the State of Illinois a present of one hundred thousand dollars to do what it pleases with, I would not think much of that as an action of Congress representing the people of the whole country. If you give one hundred thousand dollars to the State of New York, there is bound to be some sort of restriction attached by which you can see that the money is not wasted. I do not believe that a supposition like that is tenable, and I cannot answer it. If you mean to say that it is a good thing and that the government can put up money for it from somewhere so that it shall not cost anybody anything to get it, then I would like to have some of that myself. I would like to have some of that to go home on, if it were not going to hurt anything or anybody. I do not want to treat your question lightly, but I cannot see that that could be done. I do not see how you could give money to the state for any purpose without assuming the obligation to see that the money is spent properly. I believe that

there is complaint all over the country that money raised and expended by Congress has not been expended advantageously in every case. I believe that these criticisms are not justified all the time, but I know that those criticisms are being repeatedly heard.

Mr. Denison: The State Medical Society of Illinois has gone on record on this particular bill, has it not?

Dr. Humiston: Through their activities and resolutions in the House of Delegates, the whole energy of the association has been directed against it. It was instrumental largely in defeating Senate bills introduced by Mr. Glackin, which would have accepted the provisions of this bill.

Mr. Denison: As I remember last year, when this bill was under consideration, I received a copy of a resolution passed, according to my recollection by the State Medical Society disapproving this bill.

Dr. Humiston: I was afraid that you were about to ask me for a copy of these resolutions. I did not come here armed with statistics and resolutions for submission to the committee, but I am willing to send you anything that I can supply.

Mr. Denison: Am I right about that or did they pass a resolution?

Dr. Humiston: They have repeatedly done it. I do not know which one you have reference to, but there is no question about the attitude of the medical profession in Illinois on this bill. Perhaps you have in mind, Mr. Denison, a resolution passed by the Illinois Medical Society in 1920 and which received commendation from Governor Lowden. The resolutions and commendations were as follows:

WHEREAS, There is a growing tendency in our National Congress to invade the authority of the States by the introduction of bills authorizing various departments of the Federal Government to exercise public health functions and duties properly belonging to the states; and

WHEREAS, There is an equally dangerous tendency in our own State towards the assumption by voluntary and irresponsible extra governmental agencies of powers and functions properly belonging to the locally constituted health authorities; therefore be it

Resolved, That the Illinois State Medical Society disapproves of any action whereby the Federal government attempts to exercise authority over health matters in any State except insofar as questions of National or Interstate importance are involved and that we urge that the regulations of all State health matters be under the direction of the legally constituted health authorities of the state as the representative of its citizens in health conservation operation, and be it further

Resolved, That we condemn the principle of Federal State aid as pernicious and dangerous; that it is an encroachment on the functions of the State and an invasion of State authority tending to the demoralization of State Public Health work, rather than its development.

The Governor commented on the resolution as follows:

Springfield, Illinois.

May 25, 1920.

To the Secretary,

Illinois State Medical Society:

I beg to acknowledge the receipt of your letter of May 21st with resolution enclosed. I am glad your Society has taken this action, as I have been for a long time in full sympathy with the views expressed in the resolution. If the present tendencies towards centralization at Washington go on, all vitality will go from the several communities and States of the country in the management of their own affairs.

I congratulate the Society on the good work it is doing.

Very sincerely yours,

FRANK O. LOWDEN.

Mr. Denison: What did the Glackin bills refer to?

Dr. Humiston: Those bills were Senate bills. They were maternity bills on this proposition. I do not know that these are the right numbers, but if I am not mistaken, they were numbers 10, 223 and 134. Whatever their numbers, however, there were several of them, and as fast as one was squelched in committee, another would bob up. One provision in them was that if such a bill as this should be passed by Congress, the Department of Public Health of Illinois could take advantage of the funds. It was an enabling act to take advantage of the money that would be available under this bill.

Mr. Denison: Do you know the reason why they did not pass, or why they did not receive favorable consideration?

Dr. Humiston: Well, I cannot give you all the reasons. They were killed in committee, and upon about such an argument as I am endeavoring to present here. That argument was presented by Dr. Chapman, who happened to be present. That particular bill was killed in the committee right there and they never did have any chance to pass it.

Mr. Burroughs: I understood you to say in answer to Mr. Denison's questions that you did not see any way by which this Federal money could be appropriated for this very commendable object unless someone on the part of the Federal government, that is, some bureau or some person should have the right to say whether or not it was being used in accordance with the provisions of the bill. Is that your position?

Dr. Humiston: My statement was that I did not understand that Congress could be expected, or really would have the right, representing the people, to appropriate money and let go of it, regardless of the purpose for which it was used. Under conceivable conditions, it might be used to buy votes in the legislature.

Mr. Burroughs: Let me ask you this, and I ask you this as a medical man acquainted with this whole general subject: Would you think it possible to have written in the bill certain definite conditions upon which, or upon compliance with which, money should be paid to the state, and upon non-compliance with which it should not be paid to the state, and thus not leave this whole thing to the discretion of any indi-

vidual, whether he or she is at the head of the Children's Bureau, at the head of the Public Health Service, or any other bureau? In other words, that it be a matter of law to be determined by the courts whether or not, the state has fulfilled the conditions laid down in the act itself. Is that possible?

Dr. Humiston: That question is somewhat involved, but I do not believe that it could possibly be done and still be right. Really I think that the only thing that could be properly done in changing this bill would be to strike out lines 1 and 2, the enacting clause. I believe that the bill is intended by the people who got it up to be one of the best of things, but I am convinced that it will fail of its purpose, and that the net result will be more harm than good. Primarily and logically the Children's Bureau is not presumed to understand the questions involved in this bill. I know the head of this department and I admire her very much, and there is nothing personal in this at all.

Mr. Hawes: Doctor, do you know, approximately, how much the State of Illinois spends annually on its health department?

Dr. Humiston: I cannot give you those figures, but they are readily available.

Mr. Hawes: Do they run into the millions?

Dr. Humiston: They run into large amounts, considering the amount of territory covered, and they are not given grudgingly by the legislature.

Mr. Hawes: And the amount that is spent by the state is supplemented by municipal health departments in all your cities, is it not?

Dr. Humiston: In the larger cities. In Chicago, the municipal authorities do practically all of it, only a little of the state's fund is spent there and for the most part the city of Chicago takes care of its own work.

Mr. Hawes: What I am trying to get at is this: Under this bill, Illinois would be entitled to \$10,000, and then to its proportion of \$1,000,000, say, approximately \$30,000. The total amount Illinois would receive would be about \$40,000. As compared with the total amount spent in Pennsylvania, that was \$40,000 as against five or six million dollars, and I wanted to see what the proportion would be in Illinois, if you have the figures.

Dr. Humiston: I have not the figures, and I would have to do a little mathematical calculation here. We are almost as large a state as Pennsylvania.

Mr. Hawes: I wanted to see what portion of national control would be given over the health service of a state where the nation invests \$40,000 and the state invests from five to six million dollars.

Dr. Humiston: I think the question is paralleled by this statement: What is the size of the camel's nose in order that we may know how it will be when it gets its body into the tent? This is the opening wedge. Who suspects that \$1,000,000 will carry on this work when it gets started? Who ever heard of an activity of this kind that did not expand? Are not the words *billions* instead of millions already in

the testimony that has been presented here? It is the beginning we are trying to fight. If you pass this thing with one cent to be donated by Henry Ford for each state, I would still object to it.

Mr. Hawes: Doctor, I believe you and I will get along better if you will just follow by questions.

Dr. Humiston: I thought I was answering it.

Mr. Hawes: If the ratio in Illinois is the same ratio as in Pennsylvania, it will be about 1,000 to 1 of state money as against national money. In section 8 of this bill, the direction of state control is to be left to a board or to some officers who are not yet appointed, and they can make such rules and regulations as they desire, not written in the law, and with a national investment of \$40,000 seek to control a State investment of five or six million dollars. Is that correct?

Dr. Humiston: Let me straighten out your question, if I may. Are you presuming that this bill says that this state board, not yet appointed may do as it pleases? This bill says it has to come up to the regulations of the department *right in this city* or it cannot have any money to spend.

Mr. Hawes: But, doctor, I am objecting to this bill because there are at the present time no regulations and we do not know what they will be. We first pass the law and then this board writes the law so far as the regulations are concerned.

Dr. Humiston: If you have some valid objection to this bill that I have not heard of, I want to say Amen to it. (Laughter.)

Mr. Sanders: Whether it is sound or not.

Mr. Hawes: I have one other question, doctor. In this maternity question, several witnesses have said that its causes are divided into three classes: economic, social and hygienic. In which proportion, in your opinion, do each of these causes affect the total?

Dr. Humiston: I can only give you an opinion more or less offhand. I had in mind what this bill in its present form is talking about, and that is nearly all medical. I do believe that there is a very large part of influence affecting maternity and child-bearing and child-rearing, that is a matter of dollars and cents, clothing and food and houses and a roof to keep the rain out, and fuel to keep them warm, and proper dwellings to prevent overcrowding and to keep them from communicating disease in ways which they would not do if they had enough room to sleep; if they did not have to sleep, many of them, five or six in a room, or five or six in a bed. Those are economic conditions. I do not understand that this bill at present offers any money to relieve those conditions, but I do suspect and have more grounds than a mere suspicion that it is the forerunner of funds to give to the family and is fashioned after the laws in other countries where they do that. •

Mr. Cooper: Just on that point, are you opposed to that, doctor?

Dr. Humiston: If that were in this bill, I would be opposed to it. I am opposed to anything that leads

in that direction. This bill as it stands involves the practice of medicine.

Mr. Cooper: But does it involve the practice of medicine? Just a moment ago you said that undoubtedly there was a social question involved, the clothing of the child and looking after the comfort of the mother, and so forth, and then you said, where is that going to lead?

Dr. Humiston: That remark was prompted by the question of money coming up all the time and what a very insignificant amount it was and how much of taxes will have to be distributed. Now, I ought not to go into that, probably, as I should confine my remarks to the medical features of this bill, which is nearly all of it.

Mr. Cooper: Can you show me in this bill any provision which would permit the Federal government to have supervision over \$5,000,000 which the State of Illinois might contribute to this work?

Dr. Humiston: This fund is to be distributed and expended through existing functions of the government already established, either its Children's Bureau, if it has one, or one appointed by the governor, if the legislature has not provided anything and does not meet in 1922. In other words, it interlocks the expenditure of the money with established departments of the State Government, and I do not see how you can separate them.

Mr. Cooper: Perhaps I did not make myself quite plain. You say that if the state of Illinois contributes \$5,000,000 to this work and the Federal Government contributes \$40,000, you contend that the Federal Government will have entire jurisdiction over the expenditure of that money under this bill.

Dr. Humiston: Of the other \$5,000,000?

Mr. Cooper: Yes.

Dr. Humiston: No, but the Federal Government will influence it profoundly.

The Chairman: Mr. Hawes, had you finished?

Mr. Hawes: Yes, except I apprehend I have not understood the gentleman. My estimate regarding the appropriation of Illinois was excessive. I think it is now only about two and a half million dollars, but so far as the \$40,000 would go from the United States Government, it would be given under a set of rules and regulations prepared by this national department, and it would run into the ratio of \$40,000 to \$5,000,000 or \$2,500,000, or something of that kind, and my objection, Mr. Cooper, is that that regulation is not in the law. We do not know what it is today and we will not know unless it is placed in the law.

Mr. Cooper: You do not contend though, Mr. Hawes, that the Federal Government would have entire jurisdiction?

Mr. Hawes: Oh, no; but I mean that its \$40,000 if its regulations are accepted, would affect the expenditure of the \$2,500,000 or the \$5,000,000.

The Chairman: Doctor, I would like to have you elaborate a little more the answer which you gave to a question asked by Mr. Cooper to this effect, as I understand it. Would the Federal Government

under this bill through an appropriation have any control over the expenditure of the larger sum of money that might be appropriated by the state for its work. I will try to make my statement and then let you answer as you will. If the state of Illinois having a standard of its own and rules and regulations according, for the purpose of administering such a department in Illinois, should appeal to the Federal Government under some like conditions as those set forth in this bill, and in their rules and regulations should embody some principles which were not agreeable to the Federal control, here, it might be that the Federal control here would say, "We will not give you any money," might it not?

Dr. Humiston: I do not understand that the Federal Government has everything to say about the expenditure of any money except what is appropriated by the general Government, and the like amount added to the fund by the State.

The Chairman: If you will follow me through now, we will save time and you can answer me as broadly as you will.

Dr. Humiston: I want to answer you directly.

The Chairman: If the State of Illinois comes for its share of money to the Federal Board, whatever it may be, and presents as provided in this bill, regulations, plans and so forth, not agreeable to the Federal Board, the Federal Board may refuse to give them money, may it not, up to that point?

Dr. Humiston: It specifically says so.

The Chairman: Then, the natural step would be for the Federal Board to say, "we want you to modify your plans so and so, and if you do we will give you the money." That would be natural, would it not?

Dr. Humiston: Yes.

The Chairman: Then, the State of Illinois, if it should take any money from the Federal Government is obliged, you have admitted, to change its plans, and by so doing it may have fallen short in its ideas of the way to administer this kind of work.

Dr. Humiston: Well, to separate those two—

The Chairman: (Interposing.) Kindly follow me.

Dr. Humiston: I am trying to.

The Chairman: I asked you if, in the expenditure of money of the Government, the State of Illinois would not then be obliged to follow to the letter the plans set forth here in Washington, whether Illinois believed that they were the best plans or not?

Dr. Humiston: Most assuredly.

The Chairman: That is the answer. If they operated, then, under this law, and took any money from the Federal Government, the State of Illinois would have to abandon any plan which it thought was the best plan in order to get it. That you will agree to. Now, if they do that, why does not the ruling of the Federal Government control the entire outlay of the state appropriation in the administration of this work, for the reason that you cannot know, in working under this plan, which dollar is being invested for hygiene, maternity and infant care?

Dr. Humiston: In effect, that is the way it would

work out. The whole department of maternity and child welfare would be run in accordance with rules laid down here in Washington in order to get the money. The States would not have two plans of spending their own and the Federal Government's money. What it would amount to in effect would be direction and supervision by this Bureau of all the activities that had to do with this particular subject.

The Chairman: It would put the Federal Government in the position of appropriating, as Mr. Hawes suggested, \$40,000 of Federal money as against \$2,500,000 of State money, and insisting that the Federal Government should control the whole matter.

Dr. Humiston: It would have that effect.

Mr. Hoch. Are you opposed, or is your Association opposed to the dissemination of information, either by bulletin, or through Public Health methods, or otherwise, relative to pre-natal care, or the care of infants, whether it be by the State Government, the Federal Government, or by the Municipal Government? As a matter of principle, are you opposed to the state furnishing information upon matters of that sort?

Dr. Humiston: No sir. My Association is not opposed to the dissemination of information; in fact, it is quite actively engaged in the dissemination of such information, but not quite so broadly as your question puts it, because when you say through the state, national Government, municipality, public health centers, or otherwise, I can easily conceive of a mischievous sort of dissemination of information.

Mr. Hoch: Provided it is proper information it does not matter.

Dr. Humiston: As a doctor, I am asked again and again the question of whether a baby ought not to be permitted to grow a little older before another shall come along. I have no notion that this bill provides for that sort of instruction, but that sort of question will be asked.

Mr. Hoch: I am not talking about any improper information. I am talking about proper information, whether given by the doctor or whether it comes through public sources of information. I want to get at your fundamental attitude. I want to know whether, as a matter of principle doctors think that the state—and when I say the state, I use the term in its generic sense—has any business to be furnishing information—and by that I mean proper information with reference to pre-natal care, or with reference to the care of children—or should that be left entirely to the medical profession?

Dr. Humiston: No, sir; I think that the medical profession should do its best. When you say "proper information," of course, I am in favor of proper information as a medical man, and I think all of us are.

Mr. Hoch: You are opposed to the Government, either state, municipal or Federal giving any information upon this subject, because you are afraid they

will give some improper information? Is that your attitude?

Dr. Humiston: Do I understand—

Mr. Hoch: That question is perfectly plain. That is certainly a simple question. I want to get at your fundamental attitude in regard to the dissemination of information of that sort.

Dr. Humiston: The department of Public Health should disseminate information that is useful to the people, and that information of a medical nature should come through medical channels. It should be made available to the people. Does that answer your question?

Mr. Hoch: Hardly, I think. Do you think that the work being done in New York City, to which reference has been made, is a bad thing?

Dr. Humiston: I think it is a good thing. If you want to ask me more particularly, however, about the specific activities of these different agencies, I could answer you better in regard to the work nearer home, or in Chicago. I think it is quite similar to the work in New York.

Mr. Hoch: Let us stick to that question. If it is a good thing in New York City, what becomes of your argument that the state or city should not take part in the dissemination of this information and in the doing of this work?

Dr. Humiston: The question lies right here, and I am not taking issue with this question that New York City can do any of those things. New York City should do those things that are proper for her to do, but these are not proper functions of the Federal Government.

Mr. Hoch: That is what I want to get at. I want to know whether you hang your opposition solely upon the proposition that it is not a function of the Federal Government, or that it is not a function of Government at all. It seems to me that the most of your argument here has been directed against the proposition of any Government, whether state, municipal or Federal, doing this work, and it appears to me that the reasons you have advanced in that regard against Federal action would apply with equal force, so far as the philosophy of Government is concerned, against the work being done by any Government, whether, for instance, by the City of New York or the State of New York.

Dr. Humiston: As an abstract proposition, that applies but this is a concrete form of Government that we are working under. My objection is not to the objects of this bill, but to the means which are used to accomplish them through the general Government. The work should be under municipal or state departments of health within certain limits. I would place under those departments, not the practice of medicine, but sanitation and hygiene. I believe in doing all of those things. I would not leave all of that to the individual doctor, because the state has a duty to perform there. It is a well defined duty.

Mr. Hoch: On proper activities in sanitation and hygiene?

Dr. Humiston: Yes, sir.

Mr. Hoch: Do you think there is anything to fear from the state encroaching upon the domain of the profession?

Dr. Humiston: Yes.

Mr. Hoch: You do approve the activities of the public health services in some lines?

Dr. Humiston: In some lines, but not in all. We want to co-operate with the departments of public health, but we have to check them up. When they go to practicing medicine we want them checked, because the state cannot do that nearly so well as the medical practitioner. We object to the state practicing medicine, but we want to co-operate with the state in matters of sanitation and hygiene, and instruction in maternity is very properly a part of the instruction to be given by the state department of health. However, it is a state function. That is what I am asking for here. The details of this we can take care of in our own state.

Mr. Hawes: I think your answers to questions propounded by Mr. Hoch have cleared up a little of the confusion in my mind. I want to ask you the questions, to which, I think, you can answer yes or no. If you cannot, of course, you can extend your remarks. You are in favor of state and local dispensaries for the care of the sick, are you not?

Dr. Humiston: No sir, not for the care of the sick.

Mr. Hawes: For the care of the sick who are not financially able to take care of themselves.

Dr. Humiston: Of charity medical attention, yes sir.

Mr. Hawes: You are in favor of public hospitals, are you not?

Dr. Humiston: Yes, sir, I am.

Mr. Hawes: Your objections to this bill then, are two: First, because it is national control as against state control. That is one thing.

Dr. Humiston: Yes, sir.

Mr. Hawes: And, second, that because 95 per cent. of the questions involved in maternity are hygienic or medical questions, the direction should be given by competent physicians. That is your second objection?

Dr. Humiston: Yes, sir.

The Chairman: Are there any further questions, or do you care to enlarge upon any of your answers?

Dr. Humiston: I think it is clear enough from what I have already said that I am opposed to this bill. However, I wish briefly to summarize the objections which I have endeavored to express and to ask the insertion of the following telegram as a part of my testimony:

"Hon. Samuel E. Winslow, Chairman,
Committee Interstate & Foreign Commerce,
House of Representatives,
Washington, D. C.

In appearing before your committee against Shep-

pard-Towner Bill, Dr. Charles E. Humiston will represent Civic Federation of Chicago as well as Illinois State Medical Society. We have opposed successfully similar Illinois legislation as unnecessary and are concerned over tendency to extend Federal subsidies to local governments as unsound fiscal policy leading to extravagance in local governments, demands for increasing Federal aid and greater tax burdens. Please let Humiston read this.

Civic Federation of Chicago,

By Douglas Sutherland, Secretary."

Summing up the arguments against this bill, our objections to it are:

1. The principle of federal state aid as a means of financing public health activities, is financially and economically unsound, and is unfair and unjust as a method of taxation.

2. With the exception of those activities which are clearly national in character, such as quarantine and the regulation of interstate commerce, etc., public health work is a function of the state and local governments and should be paid for out of state and local funds and directed by state and local officials. The furnishing of instruction or care to mothers or any other persons needing such instruction is just as much a function of local government as is the providing of food and clothing for the destitute. The assumption and exercise of these functions by the Federal Government is an invasion of the legitimate activities of the state.

3. The claims of the advocates of this measure that the present situation regarding the care of mothers and infants constitutes an emergency; that the United States stands 17th in the list of civilized nations in maternal mortality and that the bill has the unanimous support of the women of the United States are based on insufficient and inconclusive evidence and cannot be substantiated.

4. Whatever need exists for the education of mothers regarding care at the time of child birth is being supplied by educational material distributed in large quantities by state and local health departments and by voluntary organizations.

5. The means provided in the bill will not afford any effective remedy for existing conditions.

6. The distribution of federal funds to state health organizations will inevitably lead to the domination and dictation of state activities by the Children's Bureau.

7. The ability of the Children's Bureau to dictate and largely control the appointment of the head of the Children's Bureau in each state as well as all of the public health nurses, district superintendents and others will result in the organization of a large body of salaried employees appointed and largely paid by a federal bureau, yet working under a state department of which they are, to a large extent, independent. Such a condition will produce friction and confusion in public health work and will make possible

the development of a political machine under the control of the Children's Bureau.

8. The problem of reducing maternal and infant death rates, is largely a medical problem. The passage of this measure would put the control of instruction in the different states in the hands of a body of public health nurses working under lay direction and entirely independent of medical control.

9. Whatever federal activities are necessary or desirable in the public health field should be under the control of the United States Public Health Service rather than under a bureau of the Department of Labor. While this general principle has always deserved consideration, it is of especial importance at present when Congress has created a joint commission for the purpose of co-ordinating and rearranging the executive activities of the Federal Government, for the securing of better and more economical administration. The passage of this bill would place in the hands of the Department of Labor an important health activity which belongs to the United States Public Health Service and would still further increase the confusion which now exists and which the Congressional Commission appointed under the Smoot-Reavis Resolution was intended to remedy.

For these reasons, in behalf of the 7,000 members of the Illinois State Medical Society I respectfully urge on this committee that the bill be reported unfavorably.

Thereupon the Committee adjourned until tomorrow, Tuesday, June 19, 1921, at 9:30 o'clock a. m.

ONE AUTOMOBILE AFTER ANOTHER CARRY- ING SPECIALISTS OR SUPER-SPECIAL- ISTS, JUST FAR ENOUGH APART TO KEEP OUT OF ONE ANOTHER'S DUST

A VISION OF WHAT WOULD BE DOING AT THE
COUNTY COURT HOUSE EACH MORNING, PROVID-
ING MATERNITY HEALTH CENTRE AND THE
OTHER MEDICAL SOVIET GOVERNMENT
LEGISLATION IS ENACTED

INCREASING TAXES AND ATTEMPTED BOLSHEVIKI MEDI-
CAL LEGISLATION GO RIGHT ON

The May 21, 1921, issue of the *Saturday Evening Post* has an article showing that there are several hundred lobbies operating at this season's session of Congress at Washington. Many of these are ridiculous in character and asking for all kinds of freak legislation. Here is what will happen if the bolshevik medical legislation asked for is enacted into law.

The health of our people gives rise to many associations and leagues, and affords activities to many organized for other purposes. So, if they have their way the public-health service, though denied appropriations to carry on the work we have always re-

garded as necessary, will not be allowed to deal with the health problems of maternity and infancy. That will be turned over to the children's bureau co-operating with the bureau of education, through a division of child hygiene. Some of these schemes seem well on their way to passage. The bureaus supporting them are in the above list. The women of the country seem to be making a fad of supporting these organized minorities.

If they have their way, according to Doctor Lumsden, who testified at one of the hearings—that is, "if the trend to specialization in health work should continue, and if the demands upon Congress for the building up of many big administrative health forces should prevail, the expense would be stupendous, and the waste of government money appalling. We could foresee one force in Washington and the state governmental machinery to look after the health work of expectant mothers and babies, another big department for children of under-school age, another for women who are not expectant or recent mothers, another for children of school age—and I believe there is a bill calling eventually for thirty million dollars a year for school-hygiene work—another for industrial hygiene, one for tuberculosis, another for acute communicable diseases, and one for the promotion of mental hygiene—which by this time might be seriously needed."

This witness can scarcely realize the necklaces of pearls he has cast at the feet of organizers of the job leagues of the future. Any competent job councilor could get underwritten a council or a committee or an association for any one of these national problems in six months.

"If we think of the representatives of these various agencies all over the country to do field work," the doctor goes on, "we get a vision of what would be doing at the county courthouse on some bright morning. We should see an automobile starting out to carry a nurse to look after a mother thirty miles away in one corner of the county; another automobile leaves just behind the first, carrying a specialist to look after a school child living, perhaps, in the same home to which the first is destined. Then another starts, and then another, until we see on the road, just far enough apart to keep out of one another's dust, ten automobiles, variously labeled, each carrying a specialist or super-specialist engaged to do some one kind of health work for that county. It would be entertaining, but expensive. The taxpayers of a community would never think of supporting such a proposition, and they would probably have some long, long thoughts to express to Congress."

Yes, but do you know of any Washington agency for which we are or have been taxed to be abolished because of these long, long thoughts? They and the taxes go right on.

If they have their way the public-health service will be ruined by the scattered and irreconcilable federationizing of various councils and leagues—and at the same time it will be ennobled into a full-fledged department.

COMMUNICATION FROM ATTORNEY GENERAL RELATIVE TO THE ILLINOIS PROHIBITION ACT

The office of the Society has received numerous inquiries in re. the Prohibition Act which went into effect on July 1. For the information of our members we are publishing herewith a letter received from the Attorney General's office:

July 12, 1921.

Dear Doctor:

I am in receipt of your letter of the 8th instant, in which you inquire "what the status is of the doctor at the present time in the state of Illinois in regard to the prescribing of so-called spirituous liquors."

The General Assembly passed a bill known as the Illinois Prohibition act, which was approved by the Governor on June 27, and went into effect on July 1.

Section 8 of the act provides that "no one except a physician holding a permit shall prescribe liquor." Further provision is made for the issuing of such permits by the Attorney General.

In addition to the physician's permits above referred to, provision is made by the act for the Attorney General to issue permits to manufacture, sell, purchase and transport intoxicating liquor, and to own stills. These permits cover all traffic in intoxicating liquor as to its manufacture, sale, purchase and transportation.

As an instance of the vast amount of work which this act causes this office, I call your attention to the fact that the act requires that each time a druggist purchases a quantity of liquor, that it is first necessary to procure a permit from the Attorney General, and whenever a person is transporting liquor, as in the changing of a place of residence or moving a stock of goods, that such a permit must be obtained.

You will readily appreciate the fact that this great number of applications for permits will require a large clerical force in my office if the work is to be done satisfactorily.

At the time the act was passed it was assumed that there would be a sufficient appropriation made to enable the Attorney General to promptly issue these permits, and it was not intended that applicants should be embarrassed by indefinite delay. Such an appropriation bill was passed by the legislature.

I understand it to be my duty to cause an investigation to be made on every application before a permit is issued, but in view of the action of the Governor in vetoing the appropriation, I have no means of giving the investigation and the issuing of permits prompt attention, with the very meager staff at my disposal.

I have hundreds of these applications in my office awaiting action, and the number that are being received is increasing daily. What work is being done toward disposing of them is at a great sacrifice of the other business of the office, and it has resulted in placing the work of the office in such a condition that it is very difficult for the office to function at all.

At this time I cannot give you any assurance when applications for permits will be acted upon, other than

to say that they will be disposed of as nearly as possible in the order in which they are received and investigations thereof completed, and as rapidly as it is within the power of the small clerical force at my disposal to issue them. At the present time it is impossible for me to answer all of the inquiries that I am receiving relating to this law.

I am receiving many letters from physicians and druggists, asking whether it is lawful for them to sell or prescribe liquors after they have filed the application and before a permit has been issued. The law requiring these permits became operative on July 1, and the only reply that I can make to their inquiries is that I have no authority to suspend the operation of the law, although I appreciate the embarrassment caused by this unfortunate situation.

In the meantime, I want you to understand my embarrassment and the real cause of the delay.

Very truly yours,

Attorney General.

THE ILLINOIS MEDICAL PRACTICE ACT HELD UNCONSTITUTIONAL. THE FOLLOWING IS THE FULL REPORT OF THE SUPREME COURT

Supreme Court of Illinois.

April Term, A. D. 1921.

Plaintiff in error, Lucius J. Love, graduated April 1, 1920, from The Palmer School of Chiropractic, located at Davenport, Iowa, and incorporated May 24, 1907. That institution has a full two-years' course prescribed which covers anatomy, physiology, hygiene, symptomatology, histology, chiropractic analysis, chiropractic nerve-tracing and palpation and other studies. He took the full two-years' course in that institution prior to his graduation. There is no chiropractic school or college in this country that has a four-years' course of study, and so far as this record shows, no other school or college that has more than a two-years' course. Plaintiff in error's previous training for his profession consisted of a common school education and also of more than three years' high school work. He and his wife, who is also a graduate of the same chiropractic school, opened an office May 3, 1920, in Danville, Illinois, and practiced as chiropractors for the treatment of human ailments without the use of drugs and surgery. Previous to beginning his practice he made application to the Department of Registration and Education to ascertain what was necessary for him to do to be examined and licensed to practice his profession. He received from the Superintendent of Registration instructions which the law and that Department prescribes as prerequisite to being admitted to such an examination. Among such instructions received by him was a rule or regulation of that department in this language, "This application (referring to his application for examination and license) must be accompanied by letters of recommendation with regard to the moral and professional character of the applicant from at least two reputable medical men

or osteopathic physicians who live in Illinois, or if from non-residents of the State, such letters must be endorsed by reputable medical men or osteopathic physicians of Illinois." Being advised that the requirements of the Illinois law to obtain his license were void, because unreasonable, discriminatory and unconstitutional, he began practice as a chiropractor and treated a number of patients for various ills, according to the methods of chiropractors. He was convicted and sentenced to pay a fine of \$50 and costs of prosecution in the county court of Vermilion County, October 22, 1920, on an indictment charging him with treating human ailments without the use of drugs or medicine and without operative surgery and without a license, in violation of Section 22 of the Medical Practice Act, approved June 25, 1917. He has prosecuted this writ of error direct to this court, the constitutionality of a statute being involved.

Section 22 of the Medical Practice Act provides that any person who, not being then licensed to practice to treat human ailments without the use of drugs or medicines and without operative surgery, shall treat human ailments by such methods, shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not less than twenty-five dollars nor more than two hundred dollars, or confined in the county jail not more than one year, or punished by both such fine and imprisonment, in the discretion of the court. There is no question of the violation of said Section 22 by plaintiff in error. His main defense in this case is that Section 5 of the Act which fixes the minimum standards of professional education required to practice medicine and surgery in all their branches and for treating human ailments without the use of drugs or medicine or operative surgery is invalid, because unreasonable and discriminatory, violative of Section 1, Art. II, of the Constitution of Illinois, and also of the due process clause of the Fourteenth Amendment to the Federal Constitution. That section, so far as material to the issues in this case, provides as follows:

"Section 5. Minimum standards of professional education as follows:

"1. For the practice of medicine and surgery in all their branches:

(a) For an applicant, who is a graduate of a medical college prior to July 1, 1922, that he is a graduate of a medical college deemed to be reputable and in good standing at the time of his graduation and completed a course of study in such medical college in accordance with the laws to regulate the practice of medicine and the rules of the State Board of Health established and in force at the time of graduation; * * *

"2. For the practice of any system or method of treating human ailments without the use of drugs or medicine and without operative surgery; that the applicant is a graduate of a professional school, college or institution teaching the system of treating human ailments for which the applicant desires to be licensed, which requires as a prerequisite to graduation four years' course of instruction, the time elapsing between the beginning of the first year and the ending of the last, or fourth year to be not less than forty months,

and which is deemed to be reputable and in good standing." (Laws of 1917, p. 580, 581.)

If the section fixing the requisite qualifications of plaintiff in error to obtain a license to practice his profession is invalid there can be no penalty under Section 22 imposed against him under this indictment. This is so because Sections 2, 3 and 4 of the Act provide in substance that no person shall practice medicine and surgery or any of the branches thereof, or any system or method of treating human ailments without the use of drugs or medicine or surgery without a license so to do; and no person shall, except as otherwise provided in the Act, hereafter be licensed to practice medicine, or any other system or method of treating human ailments unless he shall pass a satisfactory examination conducted by the Department of Registration and Education; and shall make application, submit evidence verified by oath and satisfactory to the Department that he is twenty-one years of age or over, of good moral character and has the professional and preliminary education required by the Act. If he has not the professional qualifications required by the statute he can not under said sections even be admitted to an examination and that was the substance of the information plaintiff in error received when he applied to the Department of Education and Registration for examination.

Chiropractic is a drugless method of treating ailments of the human body chiefly by manipulations of the spinal column with the hand. The theory of this system as explained in this record is that when the spinal column is in all its parts in place and performing its proper functions and the nerves running therefrom to the various organs and parts of the body are undisturbed and performing their functions many, but not all, of the ills to which the human body is susceptible do not and can not take place. To state it differently and more understandingly the theory of this science is that if any of the vertebrae of the spine are seriously affected or partially dislocated, such affections or subluxations generally cause disturbances in various organs and parts of the body by reason of the fact that the nerves coming from the part of the spinal column affected or partially dislocated are impinged upon or pinched and can not by reason thereof perform their proper functions. It is claimed by the advocates of this system that these disturbances or bodily ills can be and are many times completely cured by the chiropractor by manipulating the spine with the hand and thereby removing the seat of the trouble. It is not claimed that all ills and diseases of the human body can be cured or relieved by this science, but that such ills and diseases as are caused by injuries and subluxations of the spinal column may be thus relieved and cured.

It is not the province of the courts to extoll or belittle chiropractic, osteopathy or medicine and surgery. They are all now established as useful professions and as time has progressed it has been thoroughly demonstrated that all of them have accomplished and are daily accomplishing the relief and cure of human ailments. Constantly comes proof before the courts that

chiropractic, which apparently is a limited practice of osteopathy, does enable the chiropractor to relieve and cure many of the ailments of human beings and that the practice of this science is in no way deleterious to the human body. That is the proof in this record and such is the proof that has been made in many other cases that have been reviewed by courts of last resort. (*Board of Medical Examiners v. Freenor*, 47 Utah; 430, *State v. Smith*, 233 Mo., 242; *State v. Johnson*, 84 Kan., 411; *Norman v. Hastings* (Tenn.), not yet reported.) In the last case cited, as shown by a certified copy of the opinion filed in this case, the Supreme Court of Tennessee said of chiropractic, "This science of healing is well developed and recognized in many jurisdictions and many believe in its efficacy." The court further said that chiropractors can not be classed along with charlatans and fakers, and that it is not suggested that the practice of the science is in any way deleterious to the human body. The statute now in question recognizes such science as a useful and legal method of treating human ailments and prescribes what are deemed the necessary professional education and other qualifications to practice such method of healing. We must therefore, in this consideration, treat chiropractic as a useful and lawful business, science or profession and not as one dangerous or unlawful in its exercise and subject to abatement or destruction by unreasonable and arbitrary requirements, but as a profession or business that may be regulated by provisions prescribing reasonable requirements of those who apply to practice that profession without unlawful or unjust discrimination.

As one means of protecting the community against the consequences of ignorance and incapacity, the state may exact in many pursuits a certain degree of skill and learning upon which the community may confidently rely, its possession being generally ascertained upon an examination of the parties by competent persons, or inferred from a certificate to them in the form of a diploma or license from an institution established for instruction on the subjects, scientific and otherwise, with which such pursuits have to deal. This exercise of the police power of the Legislature is particularly necessary and permissible in the profession of medicine and surgery and in the profession of the practice of the law. (6R. C. L. p. 220.) The right to follow either one of these professions is one of the fundamental rights of citizenship. A person's business, profession or occupation is at the same time "property" within the meaning of the constitutional provision as to due process of law, and is also included in the right to liberty and the pursuit of happiness. (*Butcher's Union Slaughter house Company v. Crescent City Live Stock Landing Company*, 4 Sup. Ct. 652.) The power of the Legislature to impose restrictions on a lawful calling or profession must be exercised in conformity with the constitutional requirement that such restrictions must operate equally upon all persons pursuing the same business or profession under the same circumstances. It is the right and power of the Legislature to make reasonable requirements with reference to examination and qualifi-

cations to practice medicine such as will keep parties who practice this profession abreast with the progress of the times. Courts can only interfere when such provisions and laws become arbitrary and unreasonable and not in a spirit of advancing the science and benefiting and protecting the people among whom it is practiced. In this case it was a question for the court and not for the jury to determine the validity of the statute. The question whether or not a statute is constitutional is never a question for the jury. (23 A. & E. Encyc. of Law [2d ed.] p. 552.) Courts hesitate to declare an Act unconstitutional and it must be clearly so to justify the courts in doing it. But where a statute violates the due process clause of the Fourteenth Amendment or does not impose upon all persons of like age, sex and condition the same restrictions in their business or profession, it is the duty of the court to declare the act void.

The Supreme Court of Ohio, in the case of *State v. Gravett*, 55 L. R. A. 791, declared a legislative enactment void which discriminated against osteopaths by requiring them to hold diplomas from a college which required four years of study as a condition to their obtaining limited certificates, which would not permit them to prescribe drugs or perform surgery, and which did not require such time and study from those contemplating the regular practice as a condition to their obtaining unlimited certificates for the practice of medicine and surgery. For like reasons we must hold that Section 5 of the statute now in question is void because it unlawfully and unjustly discriminates against one class of physicians or those desiring to become physicians by requiring that before they can practice treating human ailments without the use of drugs, medicine or operative surgery they must be graduates of a professional school, college or institution teaching that system which requires as a prerequisite for graduation a four-year course of instruction, while for one who desires to practice medicine and surgery in all their branches the only professional education required is that he be a graduate of a medical college prior to July 1, 1922, deemed to be reputable and in good standing at the time of his graduation and has completed a course of study in such college in accordance with the law and the rules of the State Board of Health established and in force at the time of his graduation. It is sufficient under this section if the medical college was in good standing and repute at the time of his graduation, no matter whether it prescribed a two-year, three-year or four-year course. We are not prepared to hold that requiring four-years' professional education before a chiropractor or osteopath is allowed to practice his profession is unreasonable or unjust. Such a question is a question in the first instance for the legislature and the legislature is presumed to have investigated the question for itself in ascertaining what is best for the good of the profession and for the people among whom such profession is practiced. But the legislature can not discriminate against chiropractors or osteopaths as to the time of professional education required where no reason can be perceived for such

discrimination. The said act itself discloses clearly that there is an unjust discrimination against chiropractors and osteopaths. Section II of the act provides that the examination of those who desire to practice under the limited certificate shall be of the same character as that required of those who desire to practice medicine and surgery in all their branches, excepting therefrom materia medica, therapeutics, surgery, obstetrics and theory and practice. Surely then there is no reason for providing that the limited professional education of one class of physicians shall be greater or for a longer time than that for those practicing medicine and surgery in all their branches.

The regulation of the Department of Registration and Education to the effect that plaintiff in error and his class of physicians are required to accompany their application by letters of recommendation with regard to their moral and professional character, from at least two reputable medical men or osteopathic physicians is arbitrary and unreasonable. The prejudice existing against chiropractors by medical men and osteopaths is known to be intense and in many cases very unreasonable. For a chiropractor to have to conform to such a regulation would in all probability result in his being excluded from any examination whatever by reason of his inability to obtain such a certificate, although he might be able to establish a good moral character and a good professional standing by good competent men in his own or other professions or callings, outside of the medical profession. Such rules and regulations of the Board are subject to review by the courts to determine whether or not they are reasonable or unreasonable and discriminatory. *The People v. Kane*, 288 Ill. 235.

Other questions are presented in the record on the admission of evidence and in the giving of and refusing instructions that we do not deem necessary to consider. The court should have held the act in question unconstitutional and have so instructed the jury. The judgment of the court is reversed.

Reversed.

THE ATTORNEY GENERAL'S INTERPRETATION OF THE SUPREME COURT'S RULING

State of Illinois Law Department
Springfield

June 30, 1921.

MEDICINE AND SURGERY:

The Whole Medical Practice Act of 1917 held unconstitutional in *People v. Love*, No. 13881, Supreme Court.

Hon. W. H. H. Miller,

Director, Department of Registration and Education, Springfield, Illinois.

Dear Sir:

Under date of June 27 you asked me three questions:

1. What is the "status or position of the decision of the Supreme Court" in *People v. Love*, No. 13881?

The opinion in said cause was filed June 22, 1921. A petition for rehearing may be filed if notice of in-

tention so to do is filed with the clerk of said court and the reporter thereof within fifteen days from said date and the petition itself filed within twenty-five days from said date. Such petition is almost invariably decided at the term succeeding that in which the opinion was filed.

2. "In what position does this (decision) leave the Medical Practice Act supposed to have been repealed by the Act just declared unconstitutional?"

Section 29 of the act to which you refer reads:

"The following act is hereby repealed: 'An Act to regulate the practice of medicine in the State of Illinois and to repeal an act named therein,' approved April 24, 1899, in force July 1, 1899."

In *People v. Fox*, 294 Ill. 263, the court at page 269 said:

"Plaintiff in error, however, contends that because the Primary act of 1910 as amended was specifically named, the repealing clause is valid and the Primary law of 1910 repealed. The rule regarding the construction of repealing clauses is based upon legislative intent. Where it is seen from the new act and the act sought to be repealed that it was the legislative intent that the repealing clause should in all events be valid, such clause will be held to be valid, but where it is seen that the repeal is intended to clear the way for the operation of the act containing the repealing clause and to displace the old law with the new, then, if the new law be unconstitutional, the repealing clause becomes dependent and inoperative and falls with the main purpose of the act containing it. An unconstitutional statute does not repeal a former law or part of law by implication, for such unconstitutional law being void is not inconsistent with any former law. (*People v. Butler Street Foundry Company*, 201 Ill., 2361; *I Lewis' Sutherland* on Stat. Const., sec. 245.) It is evident that the legislature intended to displace the old Primary law by substituting a new one in its place, and this being so, under the rule announced the repealing clause fails when the main purpose of the act fails and no former act is repealed. It follows that the Primary law existing in this state prior to the act of 1919 are not repealed by the passage of this act."

I think the language above quoted applies here and the repealing clause of the Medical Practice act of Illinois, approved June 25, 1917, falls with the rest of the act and the act of 1899, which it purports to repeal, is still in force.

3. "Does this decision apply to the doctor of medicine and surgery wishing to take the examination for Licensure in medicine and surgery?"

The opinion of the court deals directly with the validity of section 5 of the act and holds it unconstitutional. The language of the opinion does not limit its conclusion to any particular provision of section 5, but applies to the whole section. Nowhere does the court intimate that section 5 may be so separated from the rest of the act that the remainder of the act is not affected by the validity of said section. Apparently the court was of the opinion that section 5 was so interwoven with the remaining sections of the act that

they would not have been passed without said section. The concluding sentence of the opinion is: "The court should have held the act in question unconstitutional and have so instructed the jury."

I think the opinion can be interpreted only as holding the whole act invalid and that the licensure for medicine and surgery is to be governed by the provisions of the Medical Practice act of 1899.

Very truly yours,
(Signed) Attorney General.

CHEMICAL TRADES ENDANGERED BY THREATENING ANTI-SALOON LEAGUE LEGISLATION BY CHARLES BASKERVILLE

Professor of Chemistry of the College of the City of
New York and Member of the American
Chemical Society Committee on
Industrial Alcohol

When the chemical and allied industries wake up and find that they face extinction as a result of the new Volstead bill, if enacted, there will be many complaints. As one concern after another goes to the wall there will be loud lamentations and appeals to members of Congress, the Federal departments and the courts.

But then it will be too late!

Now is the time to act; to work, to send letters and telegrams to Congress and to hold meetings of protest.

Who can blame the Anti-Saloon Leaguers for passing a bill they want, if they can? That is their business, regardless of what they do to industry or to science or to medicine.

The fact that there is a division in the so-called "dry" forces should not create over-confidence or lull anybody to sleep. The genuine prohibitionists, represented by thoughtful conservatives who are mindful of the legitimate needs of industry and medicine, are opposed to the new Volstead bill. But the extremists are beyond reason, and they are only fighting the harder without a thought of the damage they will do to everybody and everything else.

If the chemists and the manufacturers rely upon the division among the prohibitionists for salvation they are only inviting disaster.

Members of Congress will not be to blame if the chemical industries are destroyed. These men are elected from districts in all parts of the country. They are not chosen because they are chemical experts or food experts or medical authorities. They might know, but rarely do know, much about any of these subjects.

But the members of Congress take pride in representing the needs of their districts. They are always ready to listen to the "voice from home."

The members of Congress should hear from home!

There is probably not a Congressional district in the United States that does not contain an industry dependent upon the use of alcohol, whether it be a drug manufactory, a paint or varnish works, a photographic

establishment, a dye works or even a retail druggist.

The representative of that district may not have any knowledge whatever of that fact. It is for the chemist, the manufacturer, the physician, the druggist, the leaders in trade and business to tell him.

If the Congressman is not told, who is to blame?

The members of Congress should be told that the new Volstead bill known as H. R. 6752 is a bill aimed at the industry and the business of the United States. They should be told that it is much more than a bill to prevent the use of beer—that it goes much further and places impossible and absurd handicaps on the conduct of any legitimate industry using alcohol.

The opposition to the saloon, the opposition to the use of spirituous liquors is not involved in this discussion. It is not a question of law enforcement, as the chemists and manufacturers are united for enforcement of the existing law. The members of Congress have a right to know that.

It is for the trade to advise their representative in Congress of the facts and of their vital interests in this legislation.

Every chemist and every manufacturer and everyone else connected with the use of the chemical alcohol in science or the arts should make it plain to his representative in Congress, the man from his own district.

Remember, Congress may act quickly.

The message should be sent immediately.

Public Health

TYPHOID AND MALARIA INCIDENCE INCREASES

Although communicable disease incidence generally has decreased sharply since school vacation season arrived the number of cases of measles and whooping cough continue to be fairly high.

Typhoid fever and malaria have shown the usual seasonal increase. It is interesting to note that out of 120 cases of malaria reported in June, 50 cases occurred in Pike County. During the same period there were 133 cases of typhoid fever reported, 11 of which were in Chicago. Last year there were 138 cases for the State for June. All of the recent statistics indicate that typhoid fever is becoming more and more a rural disease.

BETTER BABIES CONFERENCE ATTRACTS STATE WIDE INTEREST

Entries for examination at the sixth annual Better Babies Conference, to be conducted by the State Department of Public Health in connection with the State Fair at Springfield, are full ten days ahead of the records for last year. Indications point toward the receipt of more than the maximum number of 1,000 applications prior to August 12, the date on which the application period closes.

The Better Baby Conference movement has grown very rapidly during the past six months. Scores of local communities throughout the State have carried out conferences and have found them to be so popu-

lar that a second conference on a larger and more scientific scale has been arranged in many places. Most of the Conferences planned for the near future will be held in connection with county fairs. The State Department of Public Health has been taxed to the limit of its capacity in supplying physicians, nurses, literature and other material to meet these local demands. It is the purpose of the Department to standardize, as far as possible, all local conferences in order that the greatest benefits to the children and the parents may be derived in every case.

Correspondence

THE TAIL WILL NOT WAG THE DOG DECLARATION OF INDEPENDENCE

BY THE

CATHOLIC HOSPITAL ASSOCIATION

To the Editor: At the Convention of the Catholic Hospital Association, held at St. Paul, Minn., June 21 to 24 that organization went on record, by a unanimous vote of the General Assembly, to adopt the recommendation of its Conference of Doctors, held June 23rd:

"That any Standardization plan, adopted by the Catholic Hospital Association, be its own and independent of any control by any outside organization."

and that the four principles of any such Standardization shall be:

1. *That proper organization of Staffs be effected;*
2. *That adequate Histories and Records be kept;*
3. *That the secret splitting of fees be prohibited;*
4. *That the Moral Law, as interpreted by the Catholic Church, be adhered to.*

This is the end-result of a long and determined effort of the American College of Surgeons and the 'borers from within' to seduce the Catholic Hospital Association to adopt the A. C. S. Minimum standard as its own and to accept the A. C. S. as its Standardizer.

The Conference of Doctors began as a very tame affair until the President, in extolling the merit of the A. C. S. standard, and the glory of the A. C. S., as Standardizer, asked if anyone disagreed with him, whereupon the writer called attention to the fact that it meant that 4,000 Hairs on the Tail of a 150,000 Medical

Dog presumed to be Wagger-Extraordinary to the whole animal and that the Propaganda of A. C. S. Standardization and its propagandists, with the propagandists of the vicious welfare legislation (Compulsory Health Insurance, State Medicine, National Socialization of Medicine, Maternity Centers, Medical Practice, Re-registration Acts and the like) have a common denominator in the American Association for Labor Legislation and its organ of expression, *Modern Medicine* recently changed to *The Nation's Health* and the group of un-American organizations affiliated with it, such as the Women's Trade Union League, etc.

The excitement at the Conference ran high and an over-zealous Doctor moved that the A. C. S. Minimum Standard be *not accepted*; as this would place the Catholic Hospital Association in the false position of rejecting principles which were and are in themselves meritorious and are meretricious, only, by reason of the corollary of A. C. S. domination and control of the Hospital, the motion was very properly lost, whereupon the writer moved the Declaration of Independence, above quoted and it went through. Immediately thereafter, Dr. R. E. Kane of St. Louis moved the adoption of the Four Principles, herein quoted, and that, too, went through; before the General Assembly next day, despite an attempt at Steam-Rollerization by the friends of A. C. S. Standardization the Report of the Conference was accepted and its recommendations, quoted herein, adopted as the Policy of the Catholic Hospital Association and its Declaration of Independence signed, sealed and delivered, conserving its right to Life, Liberty and the exercise of Christian Charity under *its own standard* of Efficiency and Morals.

The Committee on Standardization of the Catholic Hospital Association will be continued and augmented and it is expected that before the next Annual Meeting the details will have been submitted to the members and the Member-Hospitals so that they may vote intelligently and get the plan in operation in the Catholic Hospitals throughout the Country.

JOHN J. A. O'REILLY, M. D.

405 Union Street,
Brooklyn, N. Y.

July 10, 1921.

CRITICISM OF THE SHEPPARD-TOWNER BILL

BY EDITOR AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY.

To the Editor: The opportunity afforded to the undersigned at a recent Committee hearing in Washington on the Sheppard-Towner bill to be made acquainted with the attitude of the Illinois Medical Journal on this important subject, was very gratifying because of the apparent lack of medical representation in the discussion of the measure. It is a matter of regret that the underlying features of this bill are not thoroughly understood even by physicians and that a great deal of favorable support has been generated through a propaganda which is based on sentiment rather than practical knowledge. It is difficult to argue against a measure calculated to bring relief to mothers and babies, which is apparently sponsored by the women of the country and which may perhaps be very desirable. But in attempting to provide such relief where needed, we must not allow ourselves to be misled by impractical visionary schemes which will retard rather than advance an important branch of medical practice. In addition, the financial subsidy by the Federal government of what should be community developments, will not work out in this, as in other instances, where it has been instituted. The reliance on such subsidy by local organizations, state, municipal, town, or otherwise, would soon lead to extravagances that would be difficult to check.

Whether there is an actual need for the institution of methods providing for better maternity care among certain sections of our population is a matter for honest questioning. Undoubtedly in our rural districts and even in the smaller towns and cities, much can be done to alleviate the stress of childbearing and by a system of education diminish to a large degree certain complications of pregnancy. Admitting the possible necessity for improvement in the situation and acknowledging that a great deal is possible through the medium of Federal activity, the latter should always be subordinated to local interests. It seems to me that the most reasonable thing which the central government can do is to develop a propaganda of education in this as it has done in other fields through the medium

of its medical departments. If a community or a state feels that advice is needed in the development of a local scheme for better maternity care, the Federal government might well be the source from which this information can be obtained through its research departments and this could be done without in any way humbling the community activity or subordinating the latter. The present bill does not contemplate anything of this kind but imposes on every state that desires to avail itself of the benefits of the act a system of control and supervision exercised through a lay bureau in a department of the government that cannot by the widest stretch of the imagination be made to include prenatal or maternity care in its field of activity. Each state would be compelled to submit to the head of the Children's Bureau in Washington its scheme for prenatal and maternity care and if this did not meet with approval, no funds would be granted. Notwithstanding all that the authors of the bill may say in explanation, this is the fact, as a careful reading of the measure will show. In order to meet certain objectors, amendments to the bill provide for an advisory board which may be called into consultation by the head of the Children's Bureau, but on this board only one physician is given a place, the others, including the Secretaries of Agriculture and Labor, and the Commissioner of Education, all of whom are of course fully qualified (?) to pass on questions of maternity care. Moreover, the scheme to be developed provides for an army of trained nurses and social workers to carry out its provisions and at once elevates the nurse to a position of responsibility which her training has not warranted. The trained nurse is an important factor in the institution of any welfare scheme of this kind but her activities should be directed through medical agencies. The lack of trained nurses for hospital and private work is today a national problem, and opening up positions by the hundreds and perhaps thousands for members of the nursing profession without providing for an increase in their numbers through appropriate agencies will soon result in a most deplorable condition of affairs.

One need not be surprised at the backing accorded to this measure by organized labor, especially its desire to retain the Children's

Bureau under the Department of Labor in case any readjustment of governmental agencies is developed by other contemplated welfare bills. The opportunity to form a nurses' union affiliated with the American Federation of Labor is not to be lost sight of.

One might continue with many other objections to the Sheppard-Towner bill based purely on medical arguments. The bill is very vague in everything but its title and financial provisions. Just what would be accomplished by the greatly extended Children's Bureau in a very important field of medicine is left largely to the imagination. Personally, I believe that the medical activities would soon be subordinated to those of a sociological character and that the work of the Bureau would become buried in a mass of social studies with the production of unnecessary statistics about conditions that are already well known to the profession. In other words, any possible necessity for improving the condition of women in childbearing would become subordinated to the activities referred to, which may be of great interest to the sociologist, but would have no practical bearing on the lot of women and children and would as a class be used to exploit the desires of that constantly increasing group of women who are looking forward to a feminist scheme of the universe. The Federal government may well regard the question of improved maternity care as one of its functions, if so, then let it provide means for studying the subject through the medical agencies already constituted; let it encourage rather than discourage, young men to enter the practice of medicine, let it avoid the pitfalls of financial subsidies extended to local community efforts, and finally, let it do away with the domination of medical problems by lay agencies and the institution of a system of centralized paternalistic control, foreign to American ideals. Every physician should use his direct influence with Congress to defeat this measure and then the profession should unite in a spirit of constructive criticism and make practical suggestions for the solution of the problem.

GEORGE W. KOSMAK, M. D.

New York, July 28, 1921.

THE COMMON EVERYDAY PRACTITIONER SHOULD ASSERT HIS RIGHTS OR HE WILL AWAKEN SOME MORNING AND FIND HE HAS NONE

WE MUST HAVE A CANDIDATE FOR THE LEGISLATURE IN EVERY DISTRICT IN THE STATE

Galena, Illinois, June 15, 1921.

To the Editor: Semi-occasionally, yes even more frequently, come to our offices letters from the Legislative Committee of the State Society asking us to write, or wire our senator and representatives to favor or oppose such and such a bill that is before our Legislature.

In looking over the recent copies of the ILLINOIS MEDICAL JOURNAL I find no less than thirty-six bills up to the May issue of the Journal after which is the comment "opposed" or "approved." Why this everlasting hammering at the medical profession? Is it that the profession, as a profession, has failed to make good? Or is it due to the indifference of the profession, as a profession, to the affairs of state and the duties of citizenship?

The questions of compulsory health insurance, health centers, social uplifters, compensation insurance, maternity bills, limitation of fees, chiropractic bills, osteopathic bills, mechano-therapy bills, optometry bills, annual registration bills, cosmetic therapy bills, and lest I have left out some the "unknown" bills.

Now what are we as a profession going to do about all of this? Are we going to sit tight and let the kind of men we send to our legislatures legislate us out of business, out of the most learned profession in the world? Or will we have the "guts" to oppose such matters in the only way that will be effective?

Of course our "leaders" in the State society maintain that the influence that the Legislative Committee of the State society can bring before the Legislature will be sufficient to protect all of our legitimate interests, and that when obnoxious bills spring up, and they are springing up like Bryan said the army would, the above mentioned committee can ask the home doctor to write his senator or representative to favor or oppose such and such a measure—and the senator or representative will do as he d—pleases.

The real cause of all this hammering at the

medical profession is due to our own indifference to the affairs of state and public interest.

Two years ago as secretary of the Jo Daviess County Medical Society I sent copies of the enclosed to all the physicians in this the Twelfth District, ninety of them, and I got eight replies. Think of it. *Eight replies from ninety physicians on a question of such importance.*

READ THIS DOCTOR

The Constitutional Convention meets in January, 1920, for the purpose of revising, or rewriting the Constitution of the State of Illinois.

Each Senatorial District in the State is entitled to two Representatives or Delegates. These delegates are elected by the people of each Senatorial District. To become a candidate at the Primary Election, it is necessary to file a petition signed by one-half of one per cent. of the vote cast in the district for Governor at the last election. The petition must be filed with the Secretary of State before the first day of August, 1919.

Who is going to represent the Medical Profession from the Twelfth District—including Stephenson, Jo Daviess and Carroll Counties?

The medical profession should see that we have representation in this Convention, and should put out a candidate in many Districts of the State.

Let us not leave the framing of the Fundamental Law of the State entirely to others. Let us have something to say! The profession is vitally interested.

Reply on enclosed postal expressing your choice of some physician in the district for a Delegate to the Constitutional Convention.

Per DR. G. W. RICE,
Sec. Jo Daviess Co. Med. Society,
Galena, Illinois.

In the *Bulletin of the Jo Daviess County Medical Society*, April, 1919, I published the following, "The Doctor in Politics."

THE DOCTOR IN POLITICS

The American physician has been almost a minus quantity in politics. While his colleague abroad has been an active figure in all matters of state, and not a few of them have gained world-wide renown in this line.

This, we think, is a condition that the medical profession should look to in the future, and take a more active interest in city, county, state and national affairs.

We have, some few times, asked questions pertaining to affairs of government and received the reply: "Oh, I don't know; I am no politician." Such remarks always give us a feeling akin to that felt by the little boy who tells his mamma he has an ache in what we physicians call the abdomen.

This lack of interest in politics is the main reason that the laws pertaining to the practice of medicine are hashed and rehashed by men in sympathy with all the pseudo medical cults.

Were there a physician member of the Legislature

from a third of the districts of the state, how far would Mr. Shephardson's pet scheme of annual registration get?

The physician from the standpoint of education, knowledge of life, and his intimate association with people is particularly well qualified to make a creditable legislator.

We hope that more American physicians will in the future take a more active interest in politics. This we are sure will reflect to the credit of the profession and to the welfare of the people.

Here lies the remedy for the evils that the legislature tries to inflict on the medical profession. *The doctor must enter politics. We must have a candidate for the legislature in every district of the state.*

I would suggest a new medical society composed of the several county societies of each representative district. This society should meet twice a year. The first meeting should be held in time to bring out a candidate, a member of the medical, druggist or dentist profession, for the legislature in each district of the state. The second meeting should be held after the nominations had taken place, and for the purpose of organizing the campaign.

These new societies should be designated by number. For illustration the counties of Jo Daviess, Stephenson and Carroll forming the Twelfth Representative District should be known as the "Twelfth District Medical Society."

With twelve thousand physicians in this state organized in this manner some influence in the affairs of the state could be wielded, and the politician would no longer say, "to h— with the doctor."

In this new District Society I would advise that the druggists and dentists be included as our interests are somewhat common.

With an organization of this kind it would require but one campaign to put us on the political map, and you would see the politicians running over each other to get in favor.

With the medical profession at the present time divided into more than forty-six different divisions, (Adv. Page 8, Journal A. M. A.) exclusive of the several state societies and more springing up every year it seems time that the common every day practitioner should assert his rights or he will awaken some morning and find he has none.

Respectfully yours,

G. W. RICE, M. D.

A PROPOSED COMBINATION OF CHIROPRACTORS, OSTEOPATHS AND ALL OTHER BREEDS WITH THE VIEW OF ENACTING NATIONAL LEGISLATION.

Easton, Pennsylvania.

To The Editor:

I am enclosing you, copy of Senate Bill No. 149 which was formulated by the Welfare Committee of the State of New Jersey and passed the Senate unanimously and the House of Representatives by 40 to 16. The other cults, the chiropractors and the osteopaths both had bills which were defeated very decisively.

The Physicians of New Jersey and their efficient readers deserve the commendation of all practitioners in the clean cut manner in which they organized and dominated the legislative halls during the session just closed. My own State, Pennsylvania, has made little or no progress in organization while your State, Illinois, New Jersey and New York seem to have set the pace in the fight for medical freedom.

Have you heard anything of the proposed combination of chiropractors, osteopaths and all other breeds with the view of enacting national legislation to combat the oppressiveness of legislation in certain individual States? It has been formed or is forming at this time of writing and I believe it is to be called the "Allied Union of Drugless Healers." The passage of the enclosed Bill is the exciting factor in the formation of this protective body. If I am able to procure any more data on this new organization I will forward same to you for proper publicity and investigation.

Yours very truly,

PAUL CORRELL, M. D., PER E. M.

A DREADFUL MISTAKE

"Look here, I bought a bottle of your hair restorer last night and all it's done is to raise these big lumps on my head."

"My gracious, said the beauty doctor, "we must have sold you a bottle of bust developer by mistake."
—*The Mariem.*

WHERE HE WAS VALUABLE

"Yes," said the celebrated oculist, "he had some rare trouble with his eyes. Every time he began to read he would read double. And yet he is able to hold a very high-salaried position."

"Why, what can he do?" said the friend.

"The gas company gave him a job reading meters."

—*Logic.*

Society Proceedings

COOK COUNTY

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY MEETING

DECEMBER 5, 1920

(Continued)

DISCUSSION

Dr. Joseph Beck said he was much pleased to see an operation illustrated which he had been doing for some time. He thought he got it from Pierce or Skillern and had published it in Ochsner's book on diagnosis, both the posterior incision and turning the flap over, not taking out but raising the flap toward the septum. He called it the "Skillern operation" because Skillern had the opening through the pyriform fossa but later gave it up because it was too irritating. Dr. Beck used the electric bur, doing the operation very quickly, and that gave more room to work with than the large nose instruments. It was not necessary to see because after exposing the margin of the pyriform fossa one could bite it through. He had obtained more satisfactory results from this than from any other antrum procedure.

Dr. Norval H. Pierce thought that the matter of priority was always a small matter to argue about. He had been doing the operation Dr. Theobald described for over ten years. It was founded on the Denker idea. In an effort to do away with the buccal incision, he made the incision through the pyriform crest, and found that by reflecting the facial soft parts and lateral wall of the nose one could get an ample view of all parts of the antrum. He thought it rather an original idea to not sacrifice the inferior turbinate. He was not sure whether it was quite the right thing to do in all cases. He believed it caused a more rapid contracture of the hole, but he had seen a number of cases that had returned after five years with an ample orifice in the inferior meatus, and the anterior fifth which had been temporarily detached had grown back into place. The operation certainly gave a complete view of the antrum with a minimum amount of destruction, and he considered it as corrective as any operation could be.

Dr. Robert Sonnenschein said that he had asked Dr. Skillern about his operation some years ago and was told that he used it only in acute cases, and expected to use it only in acute cases where he wished to keep the antrum open for a few weeks. He did not make a flap. In the operation described by Dr. Theobald, a flap was made, and if it stayed in place it prevented closure of the wound.

Dr. Sonnenschein had had his own antrum operated upon by the essayist some years ago and the work was very skillfully and almost pleasantly done, except for the use of the trephine. He felt that the ronguer method would be much more agreeable. His operation was very successful and while sometimes infection occurred, a few irrigations caused it to subside. The only disagreeable feature remaining was some anesthesia of the teeth most adjacent to the antrum.

Dr. E. P. Norcross said that Dr. Skillern termed this operation the "pre-turbinate operation." As he remembered it, he described it to him as a modification of the Canfield operation, but said it was a much less radical procedure. Dr. Norcross had performed the operation several times and to him the most surprising thing was the thickness of the pyriform crest. In his opinion the point that should be appreciated even more than the method of operation was the fact that all kinds of antra, having all kinds of pathology, had been cured by a comparatively simple operation. It did no harm to try this method first and if after a time it did not cure the trouble there was no objection to doing a Caldwell-Luc or Denker operation. He had been more successful by removing the anterior tip of the turbinate, thus getting a more permanent opening. In the last year Dr. Norcross had seen a number of cases that had been operated by the Krause-Mikuliez operation, simply making a hole in the nasal wall. This had relieved the patients of all symptoms and they had had no unpleasant symptoms following the operation, all of which

went to show that too radical surgery on the antrum or any other part of the body was not always necessary to obtain the desired result.

Dr. Norcross thought the essayist was to be congratulated on having a series of forty cases that had been cured. That fact alone must bear out the practicability of the operation.

Dr. Charles M. Robertson thought this operation was a good one but that there are so many good operations for the antrum that one could not do any one in all cases.

There was one place in this operation that made trouble. When the anterior inner edge of the cavity was taken away it left a place where the cavity was covered by the soft tissues of the cheek, at which site granulations would occur. The soft tissues must be watched in all antral cases. Granulations in this place encroach on the opening and destroy the opening from the anterior end.

The operation Dr. Robertson had always advocated was a modified Caldwell-Luc with special features as to the meatal flap of mucous membrane. In this operation the wall of the inferior meatus was removed in its entirety down to the floor, leaving the floor of the antrum and the floor of the nose on a level so there would be no interference with drainage from the antrum.

The mucous membrane of the inferior meatus was not attacked until the bone had been completely removed and the edges of the wound smoothed. The nasal mucous membrane was then cut in the form of a letter X from before and upward, downward and backward and from below and forward, upward and backward, which created four flaps which were reflected into the antrum and held in place by the pack which was introduced into the antrum. These flaps cover the edge of the bony wound and part of the anterior antral wall and no soft tissue comes into contact with the nasal wound.

Dr. Robertson thought operating through the buccal cavity gave a most beautiful result, and affords a better view of every part of the antral cavity. He had operated in this way for eight or ten years and had measured the opening into the antral cavity afterward and found that the opening remained the same as at the completion of the operation. This operation gave the advantage of a cavity in which one could see and if one desired to drain the sphenoid into the antrum through the posterior ethmoid cells, it could be done under direct inspection. The operation could be done just as quickly as the other and the buccal wound was not objectionable.

Dr. Robertson considered the operation under discussion admirable, but wished to enter a protest against displacing the turbinate or cutting any off. In case the inferior turbinate extended to the floor of the nose enough might be trimmed from its lower edge to allow a ventilation space of 6 or 8 mm. between the lower edge of the turbinate and the nasal floor.

Dr. Frank Brawley said that he had seen Dr. Pierce and Dr. Theobald perform this operation and had since done six of them himself. He believed it was the best procedure for the chronic antrum that he had ever tried. He had experienced no difficulty in the after healing in any of the six cases he had had. However, he had taken off the tip of the turbinate in every case, but would try refracting the turbinate in the future.

One point was important in order to get a clear field, and this was to be careful to make the incision over the pyriform crest in the mucosa. It had appealed to him particularly because it was such a safe operation so far as the lacrimal duct was concerned. There was no danger of injuring the lower end of the duct by this method.

Dr. Alfred Lewy stated that he had the pleasure of working in Sturmann's clinic in 1898 when he perfected his operation. Sturmann was surprised to know that Canfield had already perfected the operation and published it. He thought Canfield beat Sturmann to the publication.

Several years ago Dr. Lewy saw Dr. Robertson perform his operation, which looked like a modification of the Caldwell-Luc. He did not remove the tip of the turbinate. He operated under general anesthesia and Dr. Lewy thought it took exquisite skill to peel off the bone from the membrane as he did. The unusual skill required would probably prevent Dr. Robertson's technic from becoming popular.

Dr. Walter H. Theobald (closing the discussion) stated that

in the first fifteen or twenty cases he used the electric driven trephine or drill but found it to be a great discomfort to the patient, so he discontinued using it.

The operation mentioned by Dr. Beck as the Skillern, the writer assumed is used only in acute cases.

Dr. Theobald believed Dr. Robertson would have some difficulty in keeping his flaps in place. The operations which the writer had reported were of the intranasal type. Canfield claimed priority for this operation in that his publication preceded Dr. Sturmann's of Berlin by two months.

As to the after treatment, it consisted largely in controlling the granulation tissue which forms so rapidly around the first incision. After the packing was removed he irrigated the antrum through the canula until the secretion subsided, which usually took about ten days. The patient came in for irrigation a week later and perhaps two weeks later for further irrigation. For this purpose he usually used an astringent solution of cupric sulphate in dilution, about 1:6000.

Dr. Edwin McGinnis read a paper on "Problems in Bronchoscopy and Esophagoscopy," illustrated with lantern slides.

(Abstract.)

Dr. McGinnis presented graphically some of the phases of this large subject and showed some examples of the place of arrest of foreign bodies in the esophagus. He reported a group of ten cases of foreign bodies, consisting of an open safety pin, the ring from an alarm clock, coins and telephone slugs, lodged in the esophagus, and a group of nine cases in which foreign bodies were found in the bronchi, and described the methods of removal. The foreign bodies found in these bronchoscopic cases consisted of upholsterer's tacks, a six penny nail, teeth, amalgam fillings, watermelon seed, pieces of raw carrot, egg shell and an acorn.

In conclusion Dr. McGinnis said that these cases now have an earlier diagnosis and are in better shape for operation. His early experience in the practice of the late Dr. Ingals was discouraging in that the foreign bodies remained so long unrecognized. There was usually abscess formation and extraction was almost impossible.

DISCUSSION

Dr. George W. Boot congratulated Dr. McGinnis on his success in this very difficult kind of work. In his opinion no work is quite so difficult as removing foreign bodies from the bronchi and esophagus.

He thought no one should ever search blindly for these foreign bodies. Whenever possible the foreign body should first be seen before attempting to grasp it. He very recently had an experience with a foreign body, which was a little different from the usual. The patient was a child of eighteen months who had inhaled a piece of carrot and the family physician had tried to extract it. The child was taken to the hospital and an intern tried to remove it and the piece of carrot turned and shut off the breathing. The intern did a hurried tracheotomy and then Dr. Boot was called. He found it impossible to use a suspension apparatus and then the bronchoscope as he ordinarily did because of the tracheotomy tube's being in place, but he finally located the foreign body and removed it.

Dr. Otto J. Stein thought it was remarkable how much success one could obtain in patients with real pathological lesions within the esophagus or tracheo-bronchial tract, as well as in finding foreign bodies, if one gave a lot of time to it and allowed others to know they were doing the work.

After realizing that he never would become an expert he almost dropped the work and found that by unanimous consent this particularly difficult work of scoping really belonged in the hands of only one or two who were especially interested and who had the peculiar ability to apply their skill. Aside from the foreign body extraction he used the tube work quite

often as a means of diagnosis and in the treatment of tracheal ulcers and some years ago used it a good deal in bronchial asthma, thinking that by dilatation of the trachea some of these cases could be relieved, and it did bring relief in many cases.

Aside from the foreign body work there was a very definite field for this work—in making applications to ulcers in the trachea, in removing sections of tumors below the glottis and in the larynx, diagnosing stenosis in the esophagus and trachea, which made the application of the method much broader than one ordinarily thought. Dr. Stein believed every laryngologist should practice tubing, and stated that it was now being taught at the Post Graduate Hospital.

Dr. Harry L. Pollock referred to a man who had a tracheotomy performed in June. The surgeon who did this died within a few days afterward and everyone was afraid to remove the tube. The patient was sent to him with a history of having cleaned the tube with cotton wrapped about an applicator. He was cleaning it in this way one day when suddenly the cotton and applicator disappeared down the trachea, and the patient stated that when he was sitting up it obstructed his breathing. He came in bending away forward, for in that position there was no obstruction. Dr. Pollock took out the tube and did a lower bronchoscopy, but could see no cotton nor applicator, and decided that possibly the thing had gone upward, above the tube. The patient was breathing fairly comfortably lying on his abdomen and the following morning they suspended him. Examination showed complete endema which closed the entire larynx. The following day the tube was again removed and when it was replaced, the patient said he could feel the applicator at the end of the tube. The tube was pulled out again and the cotton and applicator came out with it. He thought it had gone upward and when the tube was removed it permitted it to fall down.

Dr. Pollock said they had had a good many cases of foreign body removal and he agreed with Dr. Boot that one should never search for them blindly. He believed that all the trouble in these cases came from laryngologists going down and grasping the membrane. He was certain that every such case that had been referred to them and resulted fatally, had died as the result of having the mucous membrane torn and infected.

Dr. Pollock thought that the fluoroscope, to be of the most service, should have two tubes, a lateral and an up and down, and that it was far better to go right down and see what was being done rather than depending on the fluoroscope.

Dr. Norval H. Pierce said that lately he removed a sandbur from the larynx of a young woman after it had been in position for almost a week. The sandbur was situated in the anterior portion of the larynx between the vocal cords. The patient was walking with some friends and in going through the grass the sandbur had attached itself to her skirt. She had on a pair of mitts and in removing the bur from her skirt it attached itself to the mitt and she attempted to remove it with her teeth and in doing so she inhaled the sandbur. The remarkable thing about the case was that the patient had very little discomfort. There was no edema and little pain in the larynx and the bur was removed very easily. The patient went home in a day or two.

Dr. Edwin McGinnis (closing the discussion) thanked the members for their liberal discussion. He felt that there was one serious side to the question: if anyone wished to go into bronchoscopic work thinking to get rich, he would get badly fooled. Most of the people who get foreign bodies into the trachea and bronchus are the children who are not taken care of and the parents are unable to pay very large fees. The instruments are very expensive. The remunerative side of the work was not great, but the patients came to the office, as they had done in the days of Dr. Ingals and Dr. Friedberg, and someone had to take care of them.

JOINT MEETING OF THE CHICAGO OPHTHALMOLOGICAL AND THE CHICAGO NEUROLOGICAL SOCIETIES

A joint meeting of the Chicago Ophthalmological and the Chicago Neurological Societies was held at

the Palmer House on December 16, 1920, at 8 o'clock, with the President of the Chicago Ophthalmological Society, Dr. Alfred N. Murray, in the chair.

REPORT OF A CASE OF POLIOENCEPHALITIS SUPERIOR AND INFERIOR

Dr. G. B. Hassin reported the case of a young man, 21 years of age, an imbecile since early childhood, who entered the neurologic service of the Cook County Hospital, complaining of inability to swallow (six weeks duration), to judge distance (since childhood) and speech troubles. The examination revealed a paralysis of all the cranial nerves (from the 3rd to the 12th), inability to judge distance (disturbance of spatial sense) and marked defects in speech (dysarthria) and deglutition (dysphagia). The clinical picture was that of ophthalmoplegia and bulbar paralysis. The sensibility, reflexes including the pupillary, the genito-urinary organs were all normal. The patient died suddenly two days after his admission to the hospital. The histologic examination of various portions of the brain showed marked degeneration of the gray matter, especially of the mid-brain and medulla, and proliferative changes in the glia tissue. The latter showed a great wealth of protoplasmic glia cells, various types of gitter cells, many gliogeneous formations, such as melophages, and abundance of fat-like substances within gitter cells. Infiltrative inflammatory phenomena and hemorrhages were absent. Occasionally scattered red cells mostly enclosed within gliogeneous formation could be seen within the changed glia cells. The degenerative changes in the gray substances were in the form of chromatolysis, neurophagia, fat infiltration, broken up myelin and afons. The cortical areas were also involved, especially in the occipital lobe, the angular gyrus, cuneus and precuneus. The piaarachnoid, in this region of the brain, showed enormously distended meshes infiltrated with mesothelial cells, gitter cells and abundance of hemorrhagic foci. Fat-live substances were also found in the choroid plexus, in the cells covering its dolateral and hyperemic vessels. The third nerve showed signs of secondary degeneration, in its early stages, namely, an abundance of so-called Marchi globules enveloped by proliferated glia tissue (Schwann cells).

The histo-pathologic changes generally resembled those to be found in degenerative diseases of the nervous system, such as amyotrophic lateral sclerosis, subacute cord degeneration, multiple sclerosis, etc., being, however, especially pronounced in the mid-brain and medulla.

The conclusions to be derived from the histopathologic studies of this case are, (1) that the subarachnoid space derives its contents, in this case, fats from the brain tissues proper; (2) that the choroid plexus is probably not so much concerned in the production of the cerebrospinal fluid as in aiding in its purification and rendering it more passable.

DISCUSSION

Dr. Hiram J. Smith said that the causal sites of

ocular paralysis in general might be divided into orbital and intracranial. The intracranial might be considered as supranuclear. Nuclear fascicular—that is, fiber from nucleus or deep origin to the surface, or superficial origin and lesions of nerve trunk between superficial origin and the orbital fissure. In extensive progressive ophthalmoplegia the lesion was nearly always nuclear. Supranuclear lesions, that is, of cortex association centers and intracerebral tracts, caused conjugate paralyzes of eye muscles, seldom isolated paralysis, with the exception of ptosis. In this type of conjugate paralysis, the eyes usually were able to turn toward the affected side of the brain, but not toward the opposite, that is, “look to the lesion” as contrasted with conjugate paralysis of pontine origin, where the eyes might turn from the lesion.

Bilateral ophthalmoplegia was not necessarily due to bilateral involvement of the nuclei. Fibers from nuclei of a given side passed to the nuclei of the opposite side so that a lesion of the right third nucleus might cause a disturbance of the muscles of the opposite side as ptosis. The affection of the opposite side in a case under observation, cleared up in 48 hours, probably through compensatory action of the unaffected nucleus, as the paralysis on the side of the lesion persisted.

In progressive nuclear involvement, one would naturally look for adjacent nuclei to be affected at the same time, or in succession, and this happened. The third and fourth, or sixth and seventh, were involved together, as well as adjacent nuclei of other cranial nerves.

The diagnosis of the cause of ocular paralysis might be suggested by the type and extent of the trouble. In nuclear paralysis the underlying neurological affection would be cleared up, usually through the finding of other manifestations than the ocular. The characteristics of multiple sclerosis were readily perceived. In bulbar paralysis the early involvement of hypoglossus and glossopharyngeus was met with. In myasthenia gravis double ptosis was seen early, but the rapid fatigue of muscles of head and neck, especially muscles of mastication, was characteristic. Nevertheless, many obscure clinical pictures presented themselves. In Dr. Hassin's case, he had had an opportunity to observe post-mortem, what was actually taking place during the course of the disease.

Dr. Peter Bassoe thought it would be profitable if Dr. Hassin would emphasize the distinction between that disease, poliomyelitis superior and inferior caused by other infections and the purely degenerative affections of the same regions. A similar problem had been worked out in the case of the spinal cord. For a long time everything was called myelitis without sufficient distinction between inflammations, degenerations, and vascular lesions.

DISCUSSION

Dr. H. Douglas Singer stated that according to the statement of the essayist, the spinal fluid was absorbed apparently both through the arachnoid villi and through the choroid plexus. He wondered what was the source of the spinal fluid—if it

was true that it was absorbed at both sides of the brain. The usual view was that the choroid plexus acted as a gland to secrete the fluid, but Dr. Hassin apparently had an altogether different view.

Dr. Michael Goldenburg said that he was under the impression that the spinal fluid was secreted by the choroid plexus, and that the epithelium covering it was merely a filter.

Dr. Hugh T. Patrick asked how the fat and epithelial cells in the choroid plexus got there from the spinal fluid, and if anybody had ever found fat in the spinal fluid in this sort of a case.

Dr. Hassin, in closing the discussion, said that he did not intend to consider in detail the important physiologic points suggested by the pathologic studies of a remarkable case. He merely wished to demonstrate their probable significance.

The masses of lipid substances in the gray matter of the mid-brain and medulla were striking, but nobody ever stated the fact of their presence in the subarachnoid space and the choroid plexus. Evidently, fat-like substances had not been looked for in these regions or proper methods were not used. In fact, very few histo-pathologic studies of so-called hemorrhagic superior poliomyelitis had been recorded, the authors contenting themselves with repeating what Wernicke said. Schroeder and Spielmeyer were the first to point out that Wernicke's poliomyelitis was not an encephalitis at all. In his (Dr. Hassin's) opinion the only true superior poliomyelitis was represented by epidemic (lethargic) encephalitis in which the inflammatory phenomena were principally, though not exclusively confined to the mid-brain, in the Wernicke's type the morbid process had the same localization, but is of a degenerative, and not of inflammatory character.

As to the probable function of the choroid plexus and the spinal fluid, he wished to state that according to some authors, the cerebrospinal fluid originates partly in the brain, partly in the choroid plexus. The abundance of fat in both these structures indicated that their contents were wholly derived from the brain tissues. In the case under discussion, these contents were lipid substances; in cerebral hemorrhage they would be blood pigment and so forth. The choroid plexus, therefore, was to be looked upon as a filter for the cerebrospinal fluid which it rendered passable through the various channels of absorption. Generally speaking, the study of pathologic brain conditions might help to solve problems which so far defied the efforts of the ablest experimental workers.

THE PUPIL IN HEALTH

Dr. E. V. L. Brown stated that according to Salzmann the pupil in health had a diameter of approximately 4 mm.

The consensual reaction depended upon the stimulation of the rods and cones in the relatively small area of the macula. The stimulus was then carried by the optic nerve to the chiasma, where partial decussation took place, thence via the tractus opticus with the pupillary fibers lying dorso-lateral to the corpora quadrigemina, and finally to the nucleus of the oculomotor nerve, which functioned as the pupil nucleus as well. Through the fibers which crossed over from the right to the left side; therefore, any stimulus of the right macula went to the left pupil, centered as well as to the right and was then sent down the left-oculomotor to the sphincter of the iris on each side, the left pupil narrowing at the same time the right did. This test was of the greatest value in establishing the functional integrity of the most vital part of any injured eye. Many a patient who had just suffered a severe accident to a considerable portion of the front of his eye could easily and quickly and

honestly be told that the eye was not lost, even when the cornea was cut, the anterior chamber full of blood, the iris prolapsed or the lens dislocated, for the pupil of the fellow eye narrowed when light was thrown into the injured eye. One of the uncanny things about the consensual pupil reaction was the fact that in rare instances of disease of the cortex, such as tumor of the occipital lobe, etc., the one eye really did not see, or rather the cortex of neither side saw, yet the pupil motor stimulus was sent up the one optic nerve, across to the other side and down that oculomotor nerve and the pupil of the opposite side narrowed as perfectly as if light and color and form perception were perfect.

Widening of the pupil took place through irritation of the sympathetic. The pupil widening fibers left the spinal cord at the level of the upper two dorsal and the lower cervical vertebrae. Fibers from the upper thoracic ganglion join with some of the inferior cervical ganglion. Here there is a union with the hypoglossal. The carotid branches were then given off and the pupillo-dilator fibers proceeded in the skull to the Gasserian ganglion and united with the first branch of the trigeminus. So united they proceeded to the eye via two long ciliary nerves to the dilator sheet of muscle in the back layers of the iris. They did not pass through the ciliary ganglion at all.

Any irritation of the cervical sympathetic could, therefore, produce dilatation of the pupil. Furthermore, the irritation or stimulation of any sensory nerve might produce a dilatation of the pupil. The path here was to the cerebral cortex, the oculomotor nucleus and to the iris via the third nerve, ciliary ganglion and short ciliary nerves to the sphincter pupillae, which relaxed and allowed the dilator to work unopposed. Furthermore, the pupil widened upon any psychic stimulus, and volitional impulse and any vivid mental concept.

DISCUSSION

Dr. H. Douglas Singer stated he often found recorded, "Pupils sluggish to light," and he had never been able to satisfy himself as to what most people meant by sluggishness. Did it mean that the reaction was slow or that the degree of contraction was diminished.

In his opinion as to the pupillary light reflex pathway, the fibers that conveyed the stimulus for the light reflex left the optic tract before it reached the pulvinar. They apparently left in the region of the thalamus and traveled along the inner side of the thalamus. This seemed proven to him by two cases of tumors seen many years ago, involving the back part of the third ventricle and damaging the optic thalamus on both sides in both of which there had been Argyll-Robertson pupils.

Dr. Hugh T. Patrick stated that the dictum of Uthoff that even if there was more illumination of the pupil on one side, the pupils remained equal, was wrong. He had once ventured this opinion in Germany and had been corrected with characteristic Prussian abruptness, but had many times since then corroborated his observations.

Another curiosity could be referred to as a normal pupil: It was known that occasionally an individual could voluntarily dilate his pupil, by picturing to himself some peculiarly horrible scene, generally from his own experience.

Dr. Patrick said he would be better pleased if Dr. Brown

would speak of the segments of the cord instead of the vertebrae.

Dr. Ralph C. Hamill said that in testing the pupils, especially of colored men with very dark irides, it was difficult to tell whether there was a light reflex or not. Dr. Brown had mentioned the fact that the near-sighted individual had small pupils and he wondered whether in some individuals where the pupil was under more or less spasm small changes of size would not be visible. Also, in testing the pupils of a great many men in a short space of time, as was done with some of the men in the training camps, it was observed that there were certain kinds of pupils that corresponded to the degree of pigmentation of the iris.

Dr. I. Leon Meyers thought that the influence of the sympathetic nervous system and especially that which was noted many years ago that in stimulating the cortex of an one that brought about dilatation of the pupil. It had been noted many years ago that in stimulating the cortex of an animal while it was completely anesthetized and the stimulation was strong enough to produce epileptiform fits, the pupils would promptly dilate. This had no connection with stimulation of the cortex when it produced conjugate deviation of the head and eyes.

Dr. Robert Von der Heydt stated that as to light and dark irides, there were at least two reasons why eyes with dark irides did not respond to light as well as those with lighter colored irides. One was a sluggishness in response on account of the weight of the added pigmentation and in dark irides. In addition light would penetrate a light colored iris more readily on account of its greater transparency, and the retina would receive more stimulation for that reason.

Dr. H. W. Woodruff spoke of the statement made in the standard textbooks on ophthalmology that "inequality of the pupils was always pathological." Reference had already been made to the larger pupil in myopia. This also held when one pupil was myopic and one hypermetropic, namely, in anisometropia. In such a case one pupil was distinctly larger than the other. When he first began the practice of ophthalmology he did not know this and supposed a patient with inequality in the pupils must have a serious nerve lesion. For this reason in examining these cases the refraction should be known.

Dr. Charles P. Small said that the differences in the reactions in the normal pupil were illustrated in a case seen recently. The patient was a man in perfect health, with all the laboratory examinations negative, who was refused an increase in life insurance because he was said to have an Argyll-Robertson pupil. The pupils were widely dilated and almost immobile but they did react very sluggishly when carefully examined. He did not know why he had such a very feeble reaction, and wished some of the neurologists would explain it to him.

Dr. C. W. Hawley was reminded of a case similar to Dr. Small's which he had reported. His patient had widely dilated pupils all her life without pupillary reaction. Suddenly the left pupil was contracted to the usual size and developed reaction. She came to have the pupil dilated to look like the other. He told her to go home and pray that the other would contract like the left.

As to one pupil dilating more when it was receiving more light than the other, he had seen a similar case within two or three months. During the examination a friend of the patient asked why one pupil was dilated more than the other, and he thought it might be because that eye was receiving more light than the other. On turning the patient around he got the opposite effect and proved that this theory was correct.

Dr. Brown, in closing the discussion, in reply to Dr. Singer, said he had always understood sluggishness to refer to the rate of reaction rather than the degree. He was glad to hear Dr. Patrick emphasize the fact that direction of light influenced reaction, due to the fact that one eye had more stimulus.

Dr. Von der Heydt had answered the question about the pigmentation and the hypermetropic eye with the small pupil. It should also be noted that iridocyclitis was more frequent in lightly pigmented eyes than in heavily pigmented ones.

ROBERT VON DER HEYDT,

Corresponding Secretary.

Personals

D. Alfred S. Burdick has been elected to fill the vacancy as President of The Abbott Laboratories, caused by the death of Dr. W. C. Abbott. He is a graduate of the Alfred University, Alfred, N. Y., and Rush Medical College, Chicago. He has been closely associated with The Abbott Laboratories for over seventeen years, and for the past six years has been Vice President and Assistant General Manager.

Dr. James Edward Skinner and Dr. Charles G. Trimble, associate physicians in charge of the Alden Spears Memorial Hospital at Yenping, China, maintained by the board of foreign missions of the Methodist Episcopal Church, have been decorated by the Peking government of North China for the distinguished professional services rendered to the government troops during the recent civil war in the province of Fukien.

Dr. Leo Steiner, for six years chief medical examiner for the Chicago Civil Service Commission, has been appointed Superintendent of the Illinois Charitable Eye and Ear Infirmary.

Dr. and Mrs. T. C. Coggeshall, of Henry, are taking a tour of Scotland for study and recreation.

Dr. J. H. Boise of Buda is said to have "assisted" at an appendectomy under local anesthesia performed on himself by Drs. Nix, Flint and Shroeder at the Perry Memorial Hospital in Princeton.

Dr. Arthur L. Sprenger succeeded Dr. G. H. Stacey as Director of the Peoria Venereal Disease Clinic last month.

News Notes

The Southwest and Missouri Valley Medical Associations will hold a joint meeting October 25 to 28, in Kansas City, Mo. Five sections comprising Medicine, Surgery, Obstetrics, Eye and Ear and Genito-Urinary, will hold sessions and attend clinics in various hospitals. Members desiring to present papers will please communicate with Dr. F. H. Clark, secretary S. W. Association, Oklahoma City, Okla., not later than July 15.

The Medical Veterans of the World War will be in session during the week, and the Mid-

Western Association of Anesthetists will organize, October 24 and present a program.

The Rockford Hospital has received the gift of a completely equipped laboratory from Mrs. Walter A. Forbes, as a memorial to her parents, Mr. and Mrs. Seeley Perry of Rockford.

The Pageant of Progress Exposition, held on the municipal pier, Chicago, July 30 to August 14, contains a very elaborate presentation of public health material from the U. S. Public Health Service, the Illinois State Department of Health and the Chicago Department of Health. The mechanical models developed by Dr. C. Saint Clair Drake, now Director of Exhibits for the State and educational director of this exposition, attract great attention for originality. The Chicago Department of Health has amplified the fine exhibit it made last fall at the Coliseum, especially along the line of venereal prophylaxis. The Chicago Training School for Home and Public Health Nursing has an attractive booth. Altogether the "Health" features overshadow the splendid commercial exhibits that are said to surpass any similar exposition since the World's Fair.

An appropriation of \$1,250 was made to the Elgin Tuberculosis Association by the Elgin Health Center Committee, July 12, to cover the expenses for July and August.

Peoria physicians have organized a physicians' telephone exchange to facilitate locating and calling physicians any time, night or day. It is said that the facilities of the exchange will be extended to calling nurses also.

Elaborate plans for a physicians Credit Reporting Bureau are being prepared by a special committee of the Chicago Medical Society and published in the *Bulletin*.

Armour and Company announce the addition of the following preparations to their list: Suprarenal Cortex, Suprarenal Medulla and Placental Substance. Physicians desiring to use these products may get them from headquarters for the organotherapeutic agents.

The annual picnic of the Peoria City Medical Society was announced for August 4 at the Peoria Sanitarium.

Bloomington is said to have the lowest infant mortality rate of any city in Illinois according to the compilation of the American Child Hy-

giene Association; 40 deaths per 1,000 births.

Recent graduates in medicine may hear of an opening for practice by addressing Mrs. Edith Hall at Broughton, Ill. Owing to the recent death of Dr. Inman I. Hall there is said to be need for a successor there. Dr. Hall's office is for sale. Broughton is a village of about 600 inhabitants, located on the L. & W. Railroad in Hamilton county.

Marriages

LAWRENCE DRAPER, Chicago, to Miss Minta Watkins of Peoria at Ottawa, Ill., June 28.

IRWIN W. HOWARD, Aurora, Ill., to Mrs. Helen M. Bachmann, Chicago, June 19.

MYRON I. INGRAM to Miss Cecile Friedman, both of Chicago; June 15.

SAMUEL MCKEE LOUGEAY, Belleville, Ill., to Miss Emma Kuhn of Brentwood, Ill., July 2.

EDGAR EVERETT POOS, Okawville, Ill., to Miss Helen Duzeski of Chicago, July 2.

Deaths

LOUIS J. BECHTOLD, Belleville, Ill.; St. Louis Medical College, 1871; a practitioner in Belleville for nearly half a century; member of Illinois State Medical Society; died, June 17, from angina pectoris, aged 73.

ELLA B. COX, Pana, Ill.; Women's Medical College of Cincinnati, 1889; died, July 5, from nervous trouble, aged 62.

HENRY J. DE HAAN, East St. Louis, Ill.; Missouri Medical College, 1884; died, June 25, from cancer, aged 63.

FREDERICK WALTER EBERLEIN, Lacon, Ill.; Rush Medical College, 1886; died, June 20, from heat prostration, aged 61.

GEORGE B. GARRISON, Pearl, Ill.; American Medical College, St. Louis, 1877; a practitioner of Pearl for forty-five years; died, June 15, aged 83.

LOWELL INGERSOLL, Chicago; Hahnemann Medical College and Hospital of Chicago, 1896; died, July 1, from biliary calculi, aged 58.

ROBERT WESLEY JOHNSON, Assumption, Ill.; Eclectic Medical Institute, Cincinnati, 1872; died, June 17, aged 71.

JEFFERSON S. NEAR, Watseka, Ill.; Hahnemann Medical College and Hospital of Chicago, 1876; was several times mayor of Watseka, and under President Cleveland's administration, served as member of local board of the United States Pension Commissioners; died in June, aged 73.

LEROY ROGERS, Huntingdon, Ind.; Eclectic Institute, Cincinnati, 1880; veteran of the Civil War; died, June 13, at the National Soldier's Home, Danville, Ill., from acute cardiac dilatation, mitral insufficiency, aged 76.

WILLIAM ROHDER, Valier, Ill.; National University of Arts and Sciences, St. Louis, 1912; died, June 24, from heart disease, aged 46.

EDWIN A. WEIMER, Peoria, Ill.; Rush Medical College, 1895; died, June 7, in the Elkhart General Hospital, Elkhart, Ind., from pneumonia, aged 50.

ARTHUR BAILEY WILLIAMS, Chicago; College of Physicians and Surgeons, Boston, 1907; died, May 21, from paralysis.

CORRECTION.—The report of the death of Dr. W. T. Johnson in The July JOURNAL was an error.

LYMAN B. BLUITT, East St. Louis, Ill.; Meharry Medical College, Nashville, Tenn., 1890; died, May 12, from cancer of the throat, aged 55.

CHRISTOPHER DEAN MOWRY, Aurora, Ill.; Rush Medical College, Chicago, 1876; practitioner in Aurora for forty years; died, July 6, in the St. Charles Hospital, Aurora, from liver trouble, aged 75.

WALLACE CALVIN ABBOTT, Chicago, Ill.; University of Michigan, 1885; died at his home, July 4, from chronic nephritis.

Dr. Abbott built up an extensive practice in Chicago and about thirty years ago established the Abbott Alkaloidal Company, now known as the Abbott Laboratories, of which firm he was president continuously till his death. For several years he had been in poor health and placed the conduct of the Laboratories largely in the hands of his older employees.

Doctor Abbott was a man of broad vision and great energy. He was an organizer of rare ability, warm-hearted and beloved by his employees, business associates and hundreds whom he had befriended.

Doctor Abbott was a pioneer in the field of alkaloidal medication. He labored incessantly through his writings, and personal contact with thousands of physicians, to bring about a more careful study of the patient, and the treatment of separate symptoms as they developed, as contrasted with the older method of treating by disease names only. His influence upon the medical profession in this respect has been profound.

Doctor Abbott was co-author, with Dr. Wm. F. Waugh, of several medical books, including "The Practice of Medicine" and "Positive Therapeutics." He was, also, Editor-in-Chief of *The American Journal of Clinical Medicine*, now in its twenty-eighth year.

For the past five years Doctor Abbott has encouraged extensive research work along the line of new medicinal chemicals. As a result, a number of the remedies, formerly made only in Europe, are now manufactured by The Abbott Laboratories.

Doctor Abbott was a member of the Ravenswood Methodist Church, The American Medical Association, the Illinois State Medical Society, the Chicago Medical Society, the Medical Editors' Association, American Drug Manufacturers' Association, American Pharmaceutical Manufacturers' Association, Ravenswood Lodge, 777 A. F. & A. M., the Oriental Consistory and the Shrine.

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Original Articles

THE TAKING OF TEMPERATURE IN THE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS.*

GEORGE THOMAS PALMER, M. D.

SPRINGFIELD, ILLINOIS.

Regardless of our rather brilliant progress during the past decade or two, it must be admitted that, from time to time, our record of accomplishment in the diagnosis and treatment of tuberculosis is very definitely challenged. It has more than once been intimated that, with our ultra-refinements of diagnosis, we are filling our institutions with persons who are not clinically sick and are branding as tuberculous many who, at most, present evidence of nothing more than old and quiescent processes. It has been contended that our cures do not remain cured; that our arrested cases do not remain arrested. There is some open skepticism as to the wearing qualities of our finished product.

While it is true that the record of recoveries is infinitely better than it has ever been before and while we know that hundreds of errors occur in negative diagnosis of tuberculosis to one error in positive diagnosis, there is still sufficient justification for criticism and question to warrant our painstaking scrutiny of our records and of our methods. Errors in diagnosis are far too frequent and reactivation of cases, dismissed as arrested, are far too common to warrant any degree of smug self-satisfaction on the part of tuberculosis specialists and institutional heads.

We may attribute part of our unsatisfactory results to the newness and undeveloped state of tuberculosis work; to our lack of knowledge of exact diagnostic and therapeutic procedures; to the general neglect of tuberculosis in the past by medical colleges and medical organizations; but, having purged our consciences and relieved our sense of responsibility as far as possible in this

way, we must still face the fact that many of our errors are due to our own carelessness and our own shortcomings and to our failure to intelligently employ relatively simple procedures which we already have at hand.

During the past year, it has been my privilege to visit and study, more or less carefully, public and private sanatoria having a capacity of upward of 4,000 beds, scattered over an area extending from Indiana to California and, as a result of these studies, I am forced to the conclusion that our unfortunate results are due in large measure to inaccuracy and neglect of very simple things and to no single factor so much as to the faulty taking and recording of temperature.

In all of these sanatoria, as is true in the private practice of physicians, temperature is regarded as the most important single procedure in both diagnosis and treatment. In many cases, when we have exhausted all of our diagnostic resources without convincing results, the patient is placed under prolonged temperature observation to elicit our final and conclusive evidence.

With the diagnosis made, temperature is the determining factor in the classification of patients; in measuring the amount of rest and exercise; in prescribing the character and extent of occupational therapy; in regulating the administration of tuberculins, vaccines and other specific medication, and, finally, in settling the most important of all questions—the quiescence and arrest of the process and the discharge of the patient. In spite of all this, I believe that I am justified in saying,—if one may judge by the practice of a score of widely scattered public and private sanatoria of the better sort,—that eighty per cent, of tuberculous patients under medical care are handled and discharged without definite knowledge as to whether they are febrile or afebrile. If this rather sweeping assertion can be substantiated, the large number of reactivations after discharge should not be regarded with any degree of surprise; but should be looked upon as the result naturally to be expected.

*Read before Clinical Section, National Tuberculosis Association, at New York City, June 17, 1921.

The causes for this serious and somewhat startling condition of affairs seems to be: 1. The employment of cheap and undependable thermometers; 2. Lack of knowledge on the part of nurses and attendants as to the basic principles of temperature taking; 3. Permitting patients to take their own temperatures; 4. Insufficient time in taking temperatures; 5. Infrequency of readings and the selection of improper times of day for such readings and 6. Failure to determine the temperature reaction to varying amounts of exercise and exertion.

During the war, and until quite recently, the thermometers of even the better class of makers were somewhat below standard on account of the rush of manufacture and the shortage of seasoned glass. At the present time, however, entirely dependable thermometers may be obtained, although the market is still flooded with instruments which are entirely unreliable and have only cheapness in price to commend them. Unfortunately there is no governmental control or standardization of thermometers except in the state of Massachusetts and New York, the certificates accompanying thermometers depending for their reliability entirely upon the responsibility of the manufacturer.

It was found, in several of the sanatoria, that thermometers were purchased without regard to the reputation of the maker and, in some instances, the institutional heads had no idea as to their source. With such disregard as to character of important instruments of precision, accuracy is hardly to be expected. Even with thermometers of reliable manufacture, the conscientious clinician will see that his instruments are tested in practical use before they are accepted. This was rarely if ever done in the sanatoria visited.

Casual observation of patients during temperature taking indicated that it is not customary, in the average institution, to instruct the patient as to how the thermometer is to be employed or the causes of failure to obtain accurate results. The nurses and attendants who were questioned were in many instances unable to intelligently explain the simple underlying principles of temperature taking such as the effect of outside temperature, the necessity for close coaptation of the tongue and buccal mucous membranes to the thermometer bulb and so on. Without regard to these factors, the custom prevails of placing the thermometer in the mouth of the patient for a

given time and that period of time usually far too short for average conditions.

It is contended by reliable thermometer makers that their instruments will register accurately in one or two minutes, provided they are properly used; but it is safe to say that there is no thermometer, however accurate, which will give dependable temperature in one minute, two minutes or three minutes as employed in the average sanatorium.

In a number of the sanatoria visited, the thermometer was permitted to remain in the mouth of the patient for but one minute. In others, two minutes was the accepted time and in institutions housing 3,200, or eighty per cent. of the 4,000 patients, the period allowed for temperature taking varied from one to three minutes. A period of five minutes was exceedingly rare and of ten minutes almost unheard of.

To prove out the dependability of temperatures taken at short periods, groups of patients have been selected in my own two sanatoria and in several other public and private institutions, in none of which was the purpose of the study confided to the nurse, the only admonition being that the temperature be taken with the utmost accuracy and that the timing be very exact. With a total of about 200 patients, it was found that the temperature is almost invariably higher at two minutes than at one; usually higher at three minutes than at two; frequently higher at five minutes than at three and occasionally higher at ten minutes than at five.

In a group of patients showing subnormal temperature at one minute, twenty-five per cent. were normal or above normal in two minutes; thirty-eight per cent. above normal at three minutes; fifty per cent. normal or above normal in five minutes and ninety per cent. normal or above normal in ten minutes. Sub-normal temperature is of course, of considerable significance in tuberculosis; in the opinion of some writers as significant as elevated temperature; but in this group of patients having sub-normal temperature at one minute, forty per cent. were exactly normal in ten minutes while fifty per cent. were above normal. The difference between one and ten-minute readings varied from 1 to 2.6 degrees.

In a second group, where the temperature was normal or above normal at one minute, the same differences appear, the increase from one to ten minutes ranging from .6 to 3.4 degrees.

In one case, the patient showing normal temperature at one minute, two minutes and three minutes, was found to have a temperature of 99.6 at five minutes, 100 at ten minutes. In another, the patient with normal temperature at one minute was found to have a temperature of 100 at two minutes; 100.8 at three minutes and 102.8 at five minutes. In another, a patient with a temperature of 100 at one minute and 100.8 at two minutes; was found to have a temperature of 102.2 at five minutes.

In the first of these cases, on one, two and three minute readings, the patient would have been regarded as having normal temperature and, in the absence of any other contra-indications, would have been permitted to exercise, while we find, on five and ten-minute readings, a temperature which any cautious physician would regard as a definite indication for absolute rest.

This series of observations will be carried further, but it has been carried far enough to justify the assertion that, in the majority of cases in sanatorium practice, the attending physician does not actually know whether patients are febrile or afebrile and, what is true of institutions of the better class, is quite as true in private practice where the opportunity for close observation of the patient does not exist.

Other causes of failure to know the temperature range of the patient, are in infrequency of readings and the unfortunate selection of the time of day for temperature taking. In practically all of the sanatoria visited, temperatures were taken only twice daily and this was true in even the receiving and discharging wards. In fact, in some of the larger sanatoria, temperatures were taken only once a day and, in one of them, only once a week in the ambulatory wards.

In several of those institutions in which two daily temperatures were taken, one reading was made early in the afternoon and the other at about nine o'clock in the morning. A temperature reading before breakfast and before the teeth are brushed or before any hot or cold food is taken, is of genuine worth, giving us usually the daily minimum which has definite significance; but a nine o'clock morning temperature, in my opinion, is of so little value as to hardly justify the effort.

Thus it is noted that in sanatoria housing seventy-five to eighty per cent. of this 4,000 patients, reliance, in reality, is placed upon one

temperature a day, made, as a rule, at about two o'clock in the afternoon. This one afternoon reading will usually show the existence of elevated temperature; but the exceptions to the rule are so frequent and the knowledge as to the exact temperature so important as to make a single temperature reading dangerously undependable. It is in relying upon a single afternoon temperature that the physician in private practice very frequently overlooks most important diagnostic information.

It was also observed in many of these sanatoria that, while temperatures were frequently taken in the infirmary wards, where there was really little doubt as to the serious illness of the patient, infrequent and careless temperature taking was the rule in the receiving wards and, particularly, in those wards occupied by patients under observation for discharge. This fact alone may account for numerous inaccuracies in diagnosis on the reception of the patient and for the frequent reactivations of cases discharged as quiescent or arrested.

It is essential to sound and safe practice that temperatures should be properly taken at very frequent intervals in the receiving and diagnostic wards and that every patient considered for discharge shall undergo frequent temperature tests at rest and after varying degrees of exercise, extending over a period of a week or ten days. Unless it is known that the patient is running a normal temperature twenty-four hours in the day and is capable of prolonged and vigorous exercise without temperature reaction, his discharge as arrested or quiescent is wholly unjustifiable.

In certain sanatoria, it was found that the patients were permitted to take their own temperatures;—a practice which is mentioned only to be condemned. The results of this practice, even when conscientiously carried out by the average patient, were found to be undependable and, in two institutions, it was definitely proven that the patients deliberately falsified their temperatures to avoid restrictions of their recreation and liberty. Aside from the absolute unreliability of temperatures taken by the patient, it is my experience that certain nervous and apprehensive patients are distinctly harmed by a knowledge of their temperature curves and it is my own practice not only to have all temperatures taken by nurses or experienced attendants, but to withhold the knowledge of the temperature from the pa-

tient, particularly during the active stages of the disease.

I fully appreciate that this subject is extremely elementary and that the facts set forth are generally known to the medical profession. In view of the importance of the temperature in diagnosis and treatment, however, and especially in view of the very general disregard for its proper observation in representative sanatoria, I feel that these remarks may be presented even to this group of physicians without apology.

EPILEPSY*

JAMES C. GILL, M. D.,
CHICAGO

I have no apology to offer in presenting for your consideration a disorder that has been recognized as far back as medical history extends. Much has been written, many theories advanced in an effort to explain the nature of this disturbance. Although much progress has been made, the solution of the problem is incomplete.

Epilepsy, as the name implies, means to seize upon. Much confusion arises in looking upon epilepsy as a clinical entity, when in reality it is only a symptom, even as headache is a symptom, and should be so considered. As a preliminary, it is necessary to properly classify many different pathological conditions that are denominated epilepsy. I prefer two classifications.

First, primary idiopathic or essential epilepsy.

Second, secondary epilepsies or epileptiform seizures.

One might present many cases, all manifesting apparently the same disorder, a loss of consciousness with or without convulsive seizures, and yet, all presenting a different pathological basis. A tumor of the brain, localized meningitis, cerebral syphilis, pressure from a depressed portion of the skull, a scar from an old hemorrhage—many types of cerebral palsies of childhood; multiple sclerosis, general paresis—all may present symptoms indicative of what is ordinarily called epilepsy; and yet, the proper treatment of such cases would depend upon the etiology of each. Many cases are being transferred from the primary to the secondary epilepsies as our methods of examination improve. No case should be considered as having had a thorough investi-

gation without including an examination of the blood, spinal fluid and x-ray pictures of the skull.

I am particularly interested in presenting to you today some observations on primary or essential epilepsy. I would define primary epilepsy as a disorder of the brain without known pathology, characterized by a loss of consciousness with or without convulsive seizures.

Etiology. Etiology resolves itself into predisposing and existing factors. The most important predisposing factor is heredity, not that we expect to find epilepsy in the ancestors, although we may, but many disorders of the nervous system in the ancestors, such as hysteria, psychasthenia, alcoholism, syphilis, may transmit to the child an unstable nervous organization which manifests itself in what we call epilepsy. Probably 40 per cent. of the cases of essential epilepsy will reveal some heredity as mentioned above; and, on the other hand, we are interested to note that at times in a family of a number of children, where one will be an epileptic, all the others are practically normal. We would be at a loss to ascribe hereditary influences in the development of such cases. With this unstable nervous organization and predisposition to what we call epilepsy, the exciting causes are many. I scarcely need take your time to enumerate them. Prominent among them will be overwork and worry, loss of sleep, fright, errors in diet, constipation, the use of tea, coffee, alcohol and tobacco.

The manifestation of primary epilepsy may properly be included in three classifications: First, grand mal attack; second, petit mal attack; third, psychic epilepsy. These manifestations are all important and should receive proper consideration in order to thoroughly understand the individual case.

You are all familiar with the phase of epilepsy that is called the grand mal attack. The aura which precedes the loss of consciousness by a few seconds is present in many cases. It may be purely motor as shown by muscular twitchings in some of the muscles of the body, sensory in that it may produce a feeling of numbness or paresthesia, or, what is most frequently of all, will be the disturbance of one of the nerves of special sense, particularly the optic nerve, such as flashes, rings of light, or a sudden tinnitus; peculiar odors or taste, may point to the nerves of hearing, taste or smell.

*Read before the 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

Occasionally the aura is psychic inasmuch as the individual feels that something is going to happen and it usually does. An aura is a benefit to the patients manifesting it, inasmuch as it frequently allows them to reach a place of safety before they become unconscious. Many cases suddenly become unconscious without any warning, and then the usual phase of tonic and clonic spasm involving all the voluntary muscles of the body follows. A dilated pupil irresponsive to light, frothing at the mouth, the involuntary escape of the contents of the bladder and bowels, at times are a part of the picture of this phase of epilepsy. Many patients will pass into a deep post epileptic sleep lasting for several hours if left alone, which they should be. These attacks occur at any time of the day or night. Some patients suffer only from the nocturnal, others the diurnal type. In young women these attacks may occur only at the menstrual period. The frequency varies from a number of attacks in 24 hours to several months or even longer duration between such seizures. Many individuals seem quite normal during the intervals between attacks. Others acquire the epileptic character as shown by increased irritability, lack of control, mental depression and dullness.

The second manifestation, petit mal attacks, or little sickness, is frequently overlooked, or, if noted by the mother, is considered of no importance and I am sorry to say, that many physicians take the same view and frequently tell the mother that the child will outgrow it, but it is as important as the other manifestations of this disorder. It shows itself as a momentary loss of consciousness without falling; coming on suddenly, the patient will stop whatever he is doing at the time, frequently the eyes turn back, become fixed for a few seconds, a slight shudder passes over the body, or sometimes the patient walks rapidly up and down the room for a short time, and then returns to consciousness. During this disturbance they are as completely unconscious as the one who passes through the phase of the grand mal attack. These slight attacks may, and frequently do, occur repeatedly during the 24 hours, and we can readily see how these little storms that repeatedly sweep over the brain may have a greater deleterious effect than the grand mal attacks which occur at very infrequent intervals. Many patients manifest both phases,

grand mal attacks occasionally, petit mal disturbances frequently.

The third manifestation, psychic epilepsy, is not as common as the two mentioned above, but it occurs with sufficient frequency to warrant careful consideration. It is characterized by a loss of consciousness, usually coming on suddenly, and may last for many hours, during which time the individual may do strange things, commit misdemeanors, wander away and return to consciousness in a strange place and have absolutely no recollection of what transpired during this peculiar mental state. This manifestation of epilepsy has an important medico-legal relationship, inasmuch as acts committed while the individual is in this peculiar unconscious state are held to be irresponsible.

I have had under observation for the past year a man 44 years of age, a barber by trade, who suffers from psychic epilepsy. At times he would go to his shop in the morning, shave a number of customers, return to his home at noon for lunch and sometime during the afternoon return to normal consciousness and have no recollection of what transpired during the morning hours; the number of customers waited upon indicated by the number of cards filed during this period. His wife related strange actions and sayings during such time, of which the patient had no recollection. I felt it was not entirely safe for him to continue at his trade and upon my advice he secured a position as guard on the elevated railroad platform. He has been much better since being under observation, but his fellow workers tell me that at times he will allow a number of trains to pass without any notice upon his part. I believe that many cases of pyromania, kleptomania and dysomania all properly belong to this class.

Onset. Most cases of primary epilepsy manifest themselves before the 15th year of life. We look with suspicion upon a case as being essential or primary that does not develop before the second decade. Often the mother will tell us that the first attack came on when the child was 8, 10 or 12 years of age, possibly following some slight accident, a fall, a blow upon the head or some acute illness. Such history is usually not complete. Upon careful inquiry we will find that many of these individuals suffered from infantile spasms. We do not contend that all cases of infantile spasms are expressions of

epilepsy, particularly when they may be part of an acute toxemia or infection. The unstable nervous organization of the infant may respond to such infection with convulsive seizures, but the cases that occur in infancy or early childhood and are repeated without any apparent or definite cause, should be looked upon with suspicion because they are usually the manifestations of epilepsy.

There may be a period of a number of years during which time the child apparently is free from any disorder indicative of epilepsy, but a careful inquiry will reveal the fact that during the time from which the individual suffered from infantile spasms until they had their first convulsive seizure, they were subject to petit mal attacks which were overlooked, or, if not overlooked, were considered as being of no consequence.

Differentiation. From a history obtainable from the patient or some member of the family, it is not always easy to diagnose epilepsy without witnessing one or more of the attacks. I believe we must admit that the epileptic manifestation implies a complete loss of consciousness. The grand mal attack or the epileptic fit we must differentiate from hysteria, malingering, and from the nervous manifestations of the secondary epilepsies. From the hysterical paroxysm we differentiate by the sudden loss of consciousness, the epileptic cry, the tonic and clonic spasm and cyanosis, frothing at the mouth, biting of the tongue, the wildly dilated pupil that does not respond to light, all of which are absent in the hysterical paroxysm. A malingerer who has been well coached can cause considerable difficulty in differentiating.

Recently I had under observation at the Presbyterian Hospital, Chicago, a teamster who was injured by being knocked from his wagon by a street car. He fell striking upon the left side of his head, was considerably shaken up, but not unconscious. He was taken to a hospital where he remained for four days, during which time an x-ray of the skull failed to reveal any fracture. There was no paralysis or focal symptom indicating any injury to the brain. He was sent home and there developed certain nervous disturbances characterized by drawing up of the left leg, then the left arm, then a general tonic spasm of all the voluntary muscles of the body. An opisthotonos occurred accompanied apparently by un-

consciousness lasting for about 2 or 3 minutes and then the patient returned to normal. These attacks would occur at any time during the day or night, having anywhere from three to six or eight attacks during the 24 hours. He was brought to the Presbyterian Hospital and several days elapsed before I saw him in one of these attacks. In the meantime the nurses on the floor and the interne reported that the seizures were as described above. He always succeeded in putting on his light at night time before having one of these seizures, but that might occur with an aura preceding genuine epilepsy.

About the third day after his entrance to the hospital I was on the floor and called to the ward to witness one of these seizures. I attempted nothing at this time, more than to watch the patient, and I must confess that it appeared to be epilepsy or epileptiform in character. The whole phase seemed impossible of faking. The second time I saw him was two days later, and at this time I attempted to raise his closed lids, which attempt he resisted very markedly. I made pressure on the supraorbital nerves and he twisted his head about a good deal and finally turned over upon his face. I was then a little suspicious of the genuineness of his seizures. The third time I witnessed this disturbance, with the assistance of the interne, I set him up in bed and then succeeded in raising his eyelids—the pupil exposed to light contracted in a perfectly normal way. Again I made pressure on the supraorbital nerve. He resented it by striking me a heavy blow. After this performance I was convinced that he was malingering and so informed him and told him that I would have to report his case as such.

After a day or two, during which time the attacks decreased very markedly, he finally told me that it was all assumed, that he had been coached to go through this performance, and I must say that he had been very well coached. So we see that it is not always easy to make a diagnosis without observing the patient.

The petit mal attack may be mistaken for ordinary fainting spells or vertigo, but when you once observe a patient in one of these disturbances, the peculiar action and attitude of the patient will show you that he is entirely unconscious of his surroundings, different from the individual who feels faint for a moment or from

the individual who has an attack of vertigo without any loss of consciousness. Still, unless the individual may be subject to convulsive seizures as well, it is not always easy to make a proper differentiation.

Psychic epilepsy with its manifestations needs to be differentiated from certain hysterical conditions, particularly where the individual wanders away, doing strange things in the meantime, and apparently has no recollection of his actions subsequently. I believe it has been demonstrated that the hysterical manifestation differs from psychic epilepsy in that the hysterical nature of the disorder may be revealed during the hypnotic state, as the individual will have recollection of what transpired, whereas the subject of psychic epilepsy in the hypnotic state is entirely unconscious of what occurred during that time. The various phases of psychic epilepsy are manifested by the absolute inability of the individual to remember anything that happened during this peculiar mental state.

Prognosis. The family are always anxious to know if cases presented to us for consideration are curable. We should be guarded in our prognosis; some few cases apparently are cured inasmuch as for a number of years they show no manifestation of the disease, but if we are correct in assuming that these patients are born with a nervous organization that is not normal, in other words, an unstable organization that responds to certain influences by what we call epilepsy, then, in order to cure such an individual they would have to be born again. We can remove the exciting causes to a considerable extent—we cannot remove the predisposition and we should remember this in making our prognosis.

Treatment. The general care of the patient is of much greater importance than the drug treatment. All cases are not alike and cannot be handled by any set rule. We must treat the individual as far as possible; every exciting cause should be removed, the diet regulated, consisting principally of milk, fruit and vegetables and bread; eggs and meat very sparingly. Elimination should be kept as near the normal as possible; proper amount of work, rest and recreation should be prescribed; all stimulants, tea, coffee, tobacco and alcohol should be withheld entirely. Separate schools should be established for the education of epileptics. Many of them are not mentally capable of keeping up with the pupils

of their own age and this is a detriment as it causes worry. On the other hand, it certainly is not justice to the other children that they be allowed to witness an epileptic seizure. The harm done to impressionable children sometimes is incalculable.

After we have instructed the patient what to do and what not to do, then the question of the use of drugs comes up. Many remedies have been tried, but at the present time we rely upon some form of sedative, particularly bromides, antipyrine, luminol sodium. That the use of such remedies may tend to lessen the frequency and severity of these attacks cannot be questioned. We cannot speak of definite doses of such remedies as each individual case must be considered by itself. We use that amount of any remedy that seems necessary to produce a desired result, bearing in mind that many cases of epilepsy tend to a progressive mental deterioration and that this deterioration is frequently hastened by the injudicious use of sedatives.

I have demonstrated to my own satisfaction repeatedly that the combination of bromide of sodium with antipyrine gives better results than the bromide alone. I have controlled the frequency of attacks in many cases by smaller doses of the bromides (10 to 15 grains) with 3 to 5 grains of antipyrine given three times a day, when the larger doses of bromides, 20 to 30 grains, given with the same frequency, failed to produce such results.

Recently luminol sodium has become an important remedy with many in the treatment of epilepsy. I have used it with astonishing results in a number of cases. I have given it in doses from $\frac{1}{2}$ to 1 grain in capsule combined with sugar of milk 2 or 3 times a day. This has been followed by complete cessation of the epileptic manifestations for weeks at a time, where previous to the use of this remedy grand mal and petit mal attacks, one or both, were daily occurrences; but I have noted that such patients under the influence of this remedy, many of them, show a marked mental dullness, apathy, and an irritability that was not present before. Other cases that apparently showed such splendid results in the beginning, after a trial of several months, have gradually returned to the old frequency of attacks. Again have I seen patients who suffered from grand mal attacks every week or two and under such treatment go for several

months without a seizure, and yet become so disturbed mentally that the condition seemed serious; then followed a seizure and the atmosphere seemed cleared and the patient was much better again.

I think that we must realize what we see is only the manifestation of something back of it and that merely to relieve what we must really consider only a symptom of some disorder of the central nervous system does not cure.

Many of the cases of epilepsy that we encounter are dependents who cannot be properly cared for at home. Such cases are much better looked after in an epileptic colony. Every state should have such arrangements for caring for these dependents. Here they may be given the proper amount of work, and work that is best suited to each individual case, receive the proper diet, the proper amount of rest, etc., and then, if it is advisable, drug treatment can be instituted.

May I say a word about surgical procedures in cases of primary epilepsies, particularly those cases where the manifestation occurs in young women about the menstrual period? A number of such cases have been brought to my attention where artificial menopause has been established with the idea that if the attacks occur only at the menstrual period, if they had no menstrual period, there would be no epileptic attacks. When we realize the nervousness of the normal involutional period and remember that the nervousness of an artificially established menopause is much more intense, then we can understand that such operations only tend to aggravate the trouble. We cannot cure a disorder or disease of the brain by surgical operations outside the brain. I believe there is only one rule that we should follow, and that is, if there is some condition about the body requiring surgical procedure, operate; not because the patient is an epileptic, but because there is some condition that can be benefited by surgery.

I have intentionally left out of consideration the large class of cases that are called secondary epilepsies. The handling of such will depend upon the cause of the disturbance.

DISCUSSION

DR. HAROLD N. MOYER, Chicago: The great difficulty in the diagnosis of epilepsy is that the physician rarely has an opportunity to observe the fits. He must rely on the statement of bystanders who are notoriously poor observers.

At the Psychopathic Hospital in Chicago, a study

has been made of the globulin reactions in epileptics. It was found that there was something specific in relation to epilepsy in the increase in the globulin content. It may well be that this reaction will prove of substantial value in the diagnosis of essential epilepsy. If we do not content ourselves with the statement of the friend that the patient has fits but make a thorough physical examination, which I think should include a spinal puncture, we will arrive at a much better understanding of epileptics and in many cases will be able to learn something of the causative factors.

A very important matter is a careful study of the emotions of epileptics and this is very much neglected. Attention is called to this by the extreme views of the so-called Freudians. Roughly stated this school believes that if you fall in love with someone and then begin to hate them you may have an epileptic fit to keep from murdering them. What Dr. Gill stated in relation to treatment is most commendable, no set treatment—a careful study of the patient, dietetic regulations and medicinal treatment to fit the exigencies of the original case.

DR. JULIUS GRINKER, Chicago: Dr. Gill's presentation of the general subject of epilepsy may be considered a classic. On the subject of treatment, however, I believe he is not up to date. About a year ago I had the privilege of reading a paper on the treatment of epilepsy by luminal which was published in the *Journal A. M. A.* Though not an optimist on the treatment of nervous diseases, I have become optimistic as regards the treatment of the epileptic fit provided luminal is used in the proper dosage.

In 1913 I began the use of luminal and became a convert to it, because my patients go about their business as though there was nothing the matter with them and are free from attacks. Some have had no attacks in years. Since I read this paper, based on 100 cases, I have seen approximately one hundred new cases and my observations of the new cases augments my enthusiasm for luminal, although I have had some that did not respond even to this treatment.

Is the luminal a cure? No. There is no cure, but the most pronounced symptom being the fit, if we can enable the patient to earn his living and walk about the streets as other people do, we have accomplished much. I would urge the general use of luminal in epilepsy. One may use luminal soda but this soluble preparation requires much larger doses than luminal. When Dr. Gill mistakes the psychic outbreaks of patients taking luminal as being due to the drug, he forgets the existence of psychic epilepsy. Having given luminal in all kinds of cases of epilepsy, I am convinced of its great efficacy, and can recommend it, not as a specific, not as a "cure", but as the best palliative remedy for epilepsy. Usually the dose is one and one-half grains at night is all that is required. If this dose is not sufficient to cause a cessation of attacks, one may administer two grains. This will control the majority of cases. If two grains should prove inefficient, add another grain dose in the morning, or a grain and a half,

or two grains, if necessary. No harm will result, for it is not a habit-forming drug. I have used it in two-grain doses three times a day, and even in three-grain doses with the happiest results. One must continue to administer the efficient dose of luminal for many years and very cautiously reduce the dose at the end of the treatment.

DR. FRANK PARSONS NORBURY, Springfield: I heard a discussion on this very subject last year in Cleveland. Epilepsy is a perennial—something we have heard discussed for years and will hear discussed for many years to come. Every now and then we hear of new manners and methods of treatment; we get results. I believe we are going to have definite results with luminal, but if you will go back over the results with the bromide treatment and silver nitrate treatment you will find that we have had recorded just as brilliant results. Perhaps I am not as enthusiastic as I might be because my work began with epilepsy. When I was an interne my room was just across from the epileptic ward. I will never forget my experience when all that intervened between me and those epileptics was the wall of the clothes room. Part of my duties were to observe these epileptics. These were children and they were of the nocturnal group, especially. They were placed in beds perhaps six inches from the floor, and these beds were arranged in a circle. In the center sat the nurse with a tent-like arrangement about her to keep the light from the children. It was her duty to observe the cases and call me. Dr. Osler was at that time studying the cerebro-palsies of childhood. You will find mention of members of this group in his book, namely, the cerebral palsies of childhood connected with epilepsy. Many of the cases came to post and it was not unusual to see a child die in the epileptic attack. We were, perhaps, dealing with the more degenerative type.

From there I went into the State Hospital where there were degenerative cases with mental disorders. I was there for five or six years and not until afterwards did I see the extramural cases such as you see in your practice. There you will find the cases that belong particularly to the epileptic type, the group described by Dr. Dana and others, in which there is a vago-spasm, not connected entirely with epilepsy. As stated by Dr. Gill epilepsy is just a symptom, and we should not use the word epilepsy, but epilepsies.

DR. J. ELLIOTT ROYER, Chicago: If we accept the psychological view as set forth by Clark, epilepsy is a life reaction disorder. The epileptic reaction is a protective mechanism for the patient to withdraw from the world of reality. We should not be easily contented with a diagnosis of functional epilepsy as mild hydrocephalus, premature ossification of the skull and brain trauma are not infrequently overlooked. In the clinic of Anton puncture of the corpus callosum has proved beneficial in these organic conditions.

DR. JAMES C. GILL, Chicago (closing): I was discussing the so-called primary epilepsy, not those

that have some pathological basis. Those with palsies and hydrocephalus should be considered a separate class.

Dr. Grinker has presented a wonderful account of his results in the use of luminal and I congratulate him. I wish I might relate similar results with the use of the same remedy. Whether it is luminal or luminal sodium, I think it makes no difference which is used. With the luminal sodium the attacks stop for six weeks and sometimes for months. Dr. Grinker reports the same with luminal—wherein lies the difference? But you have not arrived definitely at anything at the end of this time. It has been my experience and that of others that sooner or later the attacks recur in the same old way. I think perhaps Dr. Grinker misunderstood me. I did not intend to convey the impression that only under the influence of luminal the patients became further depressed—which they did, by the way—but that under the influence of any sedative which will hold the attacks in check for months they become depressed, and then after having a seizure they will feel better for a time. The mental deterioration which they show seems to be hastened by sedatives, whether it is luminal sodium, bromide or other sedatives.

ADIPOSIS DOLOROSA*

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The major portion of this paper was written a number of years ago, but was never published. I have recently brought the important literature up to date and have added one more case to the two recorded. The original article was extensive, but I have abbreviated it so that it now covers only the important points.

Cases of adiposis dolorosa are probably much more common than is generally supposed, and undoubtedly many of the lipomata which are removed, because of tenderness on pressure, are cases of Dercum's disease.

As a clinical entity adiposis dolorosa was first described by Doctor F. X. Dercum of Philadelphia in 1892. This article was prefaced by a report of a single case by the same observer in 1888, and another by Henry in 1891. Between this date and 1909, about 50 cases had been reported in the literature. Mingazzini¹ in an article on the subject, published in 1919, states that up to that time about 100 cases were on record.

SYMPTOMS

These will be considered first because they are the most important factors in diagnosis.

The cardinal symptoms of adiposis dolorosa

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are: 1, Fatty deposits; 2, Sensitiveness of these deposits to pressure; 3, Pain in the fatty masses; 4, General aesthenia, and 5, Psychic or neurotic phenomena.

1. The fatty deposits are classified by Vitaut,² Achard and Laubry³ under three headings.

(a) Nodular, (b) Circumscribed diffuse and (c) Generalized diffuse. Mingazzini¹ gives the more recent classification of Fumarola as follows:

(a) Nodular form (generalized type and partial type); (b) Plain or diffuse form (generalized type, prevalently segmental type and exclusively segmental type); (c) Mixed form (Nodular and plain, generalized type and partial type). This classification is more complicated, so I shall adhere to the one given first.

The circumscribed diffuse form is the most common, the generalized diffuse next in frequency, while the nodular is quite rare.

Location of the Deposits: According to Price² the different parts of the body are affected in the following order: The trunk, shoulders, arms and thighs. The forearms and legs are less often involved, while the face and hands are but rarely affected.

In the "light" or mild cases Strubing³ found in five the following distribution: 1st—the lower extremities, 2nd—the gluteal regions, 3rd—the arm and forearms, 4th—the thorax and mammae, and 5th—the abdomen. In these cases, too, the hands, feet and face are usually free.

The patients suffering from this disorder are almost always far above normal weight, though a few cases have been reported where the weight was normal or nearly so.

2 and 3. *Pain and tenderness* in the deposits on manipulation are constant symptoms of the disease, while spontaneous pain is rare. In my first case here reported the pain was excruciating. In the second case this symptom, while marked, was not nearly so severe as in the first. In the third there is great tenderness on pressure.

In typical, well developed cases, the pain and tenderness are peculiar in that they are very intense. In other cases the pain and sensitiveness are less marked, though always present. The pain on manipulation or pressure may be sharp and shooting, or it may be burning, dull or aching.⁷

In addition to the pain and sensitiveness produced by manipulation of the fat deposits, we

find in rare cases tenderness over the nerve trunks, either those leading to the masses or remote from them (neuritis).

4. *General Esthenia:* This is present in all typical cases, and was very marked in one here reported. It varies from a tendency to fatigue to extreme prostration and is often associated with dyspnea on exertion. In a few of the reported cases, the physical condition of the patients was exceptionally good.³

The esthenia, as we shall see later on, is probably due to a perverted function of some of the ductless glands, either the thyroid or pituitary, though why it should be associated in some cases with a hypo and in others with hyperactivity is not clear. The esthenia and muscular weakness, as is the case with all other symptoms of the disease, may be slight or extreme, with all gradations between the two.

5. *Psychic phenomena* of some sort or description are present in the majority of cases. They vary from an instability (so-called) of the nervous system to a true dementia. Those most commonly observed in Dercum's disease are: Depression, impairment of memory,² melancholia, hysteria,⁴ irritability of temper and mental confusion.

Irritability of temper and mental depression² are the most common of the psychic manifestations. As adiposis dolorosa is most common in women at the menopause, it is not surprising that we find such varied psychic symptoms. In some otherwise typical cases psychic symptoms are entirely absent,³ and in others, are no more than one would expect in an individual who had almost constant pain and tenderness in some part of the body.

In addition to the cardinal symptoms above mentioned, there are others which have been reported by different observers. The most common of these are the following:

1. Parestheses, "numbness" of different parts of the body surface, tingling, and sensations of burning, coldness and crawling, areas of diminished sensation and anesthesia.²

2. The tendon reflexes are usually diminished or abolished, but may be normal or accentuated.² The same applies to the skin reflexes in the few cases where they were recorded.

3. Vaso-Motor Phenomena: Anidrosis, flushing of the skin, cyanosis of the extremities, transitory edemas, spontaneous hemorrhage from

the nose, stomach and uterus and a peculiar tendency of the flesh to bruising, have all been noted by Price.

In a case reported by Weiss³ there was a marked development of the blood vessels in the fat deposits, which seemed to justify the conclusion that the variation in the size and tenderness of the tumors was due to a variation in the fullness of the vessels. Schwenkenbecher¹⁰ is of the same opinion. In some cases there is a bluish discoloration of the skin over the tumors with reduced temperature,⁴ which would indicate some alteration in the function of the vaso-motor nerves. Thimm⁵ and Rome⁶ found the capsules of some of the tumors to be very vascular and that this increased vascularity extended into the overlying skin.

4. Trophic Changes: Under this head are mentioned by Price² and Weiss:³ slowly healing ulcerations, blebs and bullae on different parts of the body, loss of hair, early graying of the hair, sugillations and scleroderma. Hammond⁸ reports a case where the skin was more pigmented than usual.

5. Myxedema: Many cases have been reported with myxedematous manifestations, and this is no more than we might expect, in view of the fact, that the thyroid gland is so often diseased. H. Stern⁹ in 1910 reported a case of Dercum's disease with myxedema, and thought that altered thyroid secretion was responsible for both.

Dercum's first case was associated with myxedematous symptoms, and the case of Henry described in 1891 was reported as one of "myxedematoid dystrophy,"³ because of the factors which seemed to coincide with myxedema. However, the well developed case of myxedema bears no resemblance to the well developed case of adiposis dolorosa, and it should be considered a complication rather than a symptom. This is the view taken by Ewald.

6. A secondary anemia is also frequently found. (Strubing).⁴

7. Changes in the bones and joints: These are not common, but are more frequent in the joints (Potain and Strubing).⁴ Dercum in 1902¹¹ described a case with multiple joint complications. Renon and Heitz in 1901 recorded another case of adiposis dolorosa with multiple arthropathes.

In a case reported by J. P. Parkinson¹² in

1907 there were present the symptoms of adiposis dolorosa with myxedema, shooting pains in both arms and crepitus in the left shoulder joint.

In 1909 Price and Hudson¹³ reported a case with imperfect development of the ribs and vertebrae. Pennato⁶ found in one case a combination of adiposis dolorosa and osteomalacia.

The onset of the disease is usually gradual, a few have been more sudden, but none has been abrupt.

ETIOLOGY

Nothing is known with certainty in regard to the causation of the disease. In some cases there is:

1, A family tendency to obesity;²⁻⁶ 2, A family history of adiposis dolorosa itself. In Abraham's case,⁶ the 11-year-old daughter of the patient suffered from obesity and indefinitely localized pains, and Chevers⁸ reports a case in a male, whose father and sister had the same disease. Hammond⁸ also records a case where two sisters suffered from the malady. In Mingazzini's case,¹ the mother and brother suffered from the same disease, and in Carrel's, mother and daughter were both affected. 3, A neuropathic heredity, and 4, A previous personal neuropathic history. Collins, in 1895, reported one case of his own, and five others by Peterson and Loveland,³ all in women between forty and sixty years of age, with a history of neuropathic predisposition, as well as of syphilis and alcoholism.

5. As regards sex, adiposis dolorosa is more common in women than in men, at least in the ratio of 6 to 1.² In the cases collected by Kraft,⁴ 87 in number, there were 70 females and 17 males, or 4 to 1 (75 per cent.). Among 27 cases reported by Weiss,³ there were only 4 males.

6. The age of the patients may range from 11 to 78 years, these extremes being the limits in the cases recorded in the literature. Grafe⁷ records a case at the early age of 11, and White, another one in a patient of 12. Most of the cases, however, occur between the ages of 35 and 50 years; middle aged women, who have just passed the menopause.⁶ In males, the majority of the cases occur between the ages of 30 and 40 years.

7. Alcoholism, syphilis and tuberculosis are occasional etiological factors, all probably acting in the same way by their toxic effects on the ductless glands. In a recent case reported by

Mingazzini,¹ the Wassermann was positive, but the patient improved greatly after partial thyroidectomy, without anti-specific treatment. E. W. Taylor² reports a case that developed during convalescence from alcoholic neuritis. In 5 of the 27 cases reported by Dercum, Henry, Raux and Vitaut, Louste and Weiss, alcoholism played a part in the etiology. Fetterman and Strickler¹⁴ record a case occurring in the course of an advanced tuberculosis.

Syphilis was thought to be an important causative factor in a case reported by Hale White,⁶ where it was congenital, and also in acquired cases by Weiss³ and Hammond.⁸ In this connection it is interesting to note the observations of Merklen, Devaux and Desmonliere¹⁵ on asthenia, due to polyglandular-endocrinederangement of syphilitic origin. The symptoms cleared up completely under specific treatment, which led the writers to believe that the asthenia was due to a syphilitic lesion of the ductless glands. In Pizarro's case,¹⁶ the cause was undoubtedly syphilitic, as all of the symptoms cleared up under anti-specific treatment.

8. Trauma has preceded the onset of the disease in a considerable number of recorded cases. Klingman¹⁷ in 1908 reported a typical case where the tender fatty mass developed in the right axilla after trauma.

In the cases collected by Kraft⁶ in 1907, trauma was rather a common element in the etiology. Cecikas¹⁸ regards traumatism as an important factor. His patient habitually leaned against a desk, the left ileo-costal region being subjected to pressure. This is where the painful lipomata subsequently appeared.

In the three cases herein recorded, there was a history of trauma in all.

9. Operations on the sexual organs seemed to stand in some relation to the disease. This is not strange when we consider that the condition develops most frequently at the menopause. (In 7 of Kraft's cases.)

In Thimm's case⁵ the primary cause of the disease was apparently the very early menopause induced by the numerous operations performed. Stanley⁹ recorded the case of a woman, aged 40, in whom the disease developed several years after the ovaries had been removed. Sicard and Berkovitch in 1908¹⁹ reported two cases of Dercum's disease, coming on subsequent to oophorectomy, and to these they add a third of the same type.

The disease has been noted after parturition, abortion⁶ and lactation,⁶ with menorrhagia,²¹ and is often aggravated by painful menstruation and retroflexion of the uterus. In the case of Anciano,⁶ the development of the disease was accompanied by an atrophy of the testicles.

10. Infectious Diseases: Kraft⁶ mentions, as causative factors, some of the acute infective diseases such as "rheumatism" and "typhoid." Marcon⁶ reported increase in the severity of the pain and the development of new tender areas after "la grippe."

PATHOLOGY

Under this heading we have to consider the pathologic changes in the following: 1. The thyroid gland. 2. The pituitary body. 3. The supra-renal bodies. 4. The fatty tissues; particularly the subcutaneous fat. 5. The peripheral nerves. 6. The central and sympathetic nervous system. 7. The genital organs. 8. The "hemo-lymph glands."

As it is the opinion of most observers, particularly Dercum, that adiposis dolorosa is primarily a disease of the ductless glands, especially the thyroid and pituitary body, we will consider these first.

1. *The Thyroid:* George E. Price² records the autopsy findings in 8 cases. In 7 of these the thyroid was affected. In cases 1 and 2, the gland was enlarged and the site of calcareous infiltration; in case 3, there was atrophy; in case 4, colloid degeneration; in case 5, the thyroid was normal; in case 6, it was hypertrophied; in case 7, there were inflammatory changes with increase in the interstitial connective tissue, and in case 8, there was dilatation of the acini with infoldings of the epithelial lining.

Dercum and McCarthy in 1902²² were convinced from their observations that disease of the thyroid was a very important etiological factor. Taylor and Luce²³ report a case to show that an intoxication from the thyroid is responsible for the disease. In Roux's case there was hyperthyroidism.³

A. J. Booth²⁰ thinks that the almost constant changes found in the thyroid point toward it as the most frequent cause of the disease.

In 1906 two autopsy reports appeared, one by Loening and Fuss²⁴ and one by Guillian and Alquier.²¹ In the former the thyroid was atrophied and in the latter hypertrophied. Edwin Bab²⁵ observed a case which he reports in detail.

Both lobes of the thyroid were enlarged, especially the right. In Mingazzini's case¹ the right lobe of the thyroid was as large as a lemon, and consisted of two portions, one above the other. Sections showed embryonic thyroid tissue.

In the first case herein reported, about two-thirds of the thyroid was removed several months before the painful fatty mass was extirpated. The gland was about three times its normal size, both lobes equally enlarged and hard in consistency. Microscopic examination of the gland showed round celled infiltration of the connective tissue around the alveoli, with enlargement of the latter and, in places, a proliferation of the lining cells. In the second case there was no enlargement of the thyroid gland and no symptoms of hypo or hyperthyroidism. In the third case, the patient first noticed enlargement of the thyroid 30 years ago, and it has remained the same size for the past 10 years.

There are some who argue that the changes in the thyroid are not responsible for the symptoms, for instance, Fetterman and Stickler.¹⁴

W. Duering⁴ cites cases from Strubing's clinic. He agrees with Strubing and Schwenkenbecher¹⁰ that neither a quantitatively nor qualitatively changed secretion of the thyroid can be held responsible for the occurrence of adiposis dolorosa.

After all has been said and done, we must admit that the thyroid does play a most important part in the etiology of the disease. Just what part it plays is not absolutely certain, but the evidence goes to show that it is probably an alteration in its secretion.

2. *The Pituitary Body:* Next in importance to the thyroid comes the hypophysis cerebri, as a factor in the etiology and pathology.

The structure of the hypophysis cerebri and its functions, as shown by clinical and pathological observations, and experimental removal, are so well known that I shall review them but briefly. Normally the hypophysis consists of two lobes: 1, the anterior and larger, originating from the roof of the pharynx, and composed of epithelial columns, surrounded by venous spaces, into which its secretion discharges, and 2, the posterior, smaller, from the third ventricle, composed of a central neuroglial portion and an epithelial investment. The secretion of this is supposed to go into the cerebro-spinal fluid. Partial removal of the gland in both young and

adult animals leads uniformly to adiposity. There is a general agreement that the hypophysis is closely related to the other glands of internal secretion and involvement of any member of the series, causes a readjustment in the activity of the others.

The important points about the pituitary body in this connection is that 1 diseases affecting it tend to produce adiposity, and 2 it is closely related to the other glands of internal secretion. The exact relationship of these secretions is entirely unknown, but we do know that the gland is often found affected in cases of adiposis dolorosa. For the theoretical considerations, please consult the later references in the bibliography.

The relationship between the thyroid and pituitary body is shown by the observations of Vassale, Ponfick, Boyce and Beadles, Langhas, Nufice, Dolego, and many others, who demonstrated an enlargement of the gland in myxedema, while on the other hand, Lediard, Lannois and Pierre Roy have reported cases of acromegaly, with marked hypertrophy of the thyroid.²

Price believed that the hypophysis was almost as important as the thyroid in the etiology of the disease. In the autopsies which he reported, it was distinctly affected in five, as follows: glioma, adeno-carcinoma, alveolar carcinoma and inflammatory changes, suggesting alveolar or glandular carcinoma.

3. *The supra-renal bodies* are not mentioned in most of the autopsies on record. They were "hypertrophied" in a case reported by Dercum and McCarthy (quoted by Price), where at autopsy there was adenocarcinoma of the pituitary body.

4. *The Fatty Deposits:* Examination of these shows that the fat may be normal, both macroscopically and microscopically (Kraft),⁶ or it may be myxedematous, permanently or intermittently. Edema in the fat deposits is very common.³ Dercum investigated the fatty masses in one of his cases by puncture and found three phases of development: 1st, An initial edematous swelling; 2nd, A lipomatous change, and 3rd, A terminal sclerosis.⁶

Schwenkenbecher¹⁰ noted that well developed fat infiltration does not occur where the clothing fits firmly over the skin. It does, however, show a tendency to develop in the pendulous portions where there is blood and lymph stasis, as in the arms and legs. While this may be the rule, there

are exceptions. In case No. 3, herein reported, the tender fatty deposit was just to the left of the umbilicus, where pressure of the skirt bands and corsets was most pronounced; in fact the patient was obliged to remove the steels from the corsets in front on the left side before she could wear them at all.

As stated before, there is sometimes a capsule around the painful fatty masses (Mingazzini),¹ and when present it often contains numerous dilated blood vessels,⁴ which may extend into the deposits themselves.⁵

5. *The Peripheral Nerves:* Dercum²² noted in one case extensive interstitial neuritis of the peripheral nerves in the fatty deposits, without changes in the larger nerve trunks.

Burr² described interstitial neuritis in one of his cases, while Price² reported interstitial and parynchymatous neuritis in one case and muscular atrophy with neuritis of the larger nerve trunks in another.

Allbutt²⁷ considers that the local pathology consists of an increase of the fatty and connective tissues with degeneration of the nerves in the tumor masses.

6. *The Central Nervous System:* Little can be said with certainty in regard to changes in the central nervous system, as they are rare, and when present are probably coincidental or dependent upon changes in the ductless glands, especially the hypophysis, which is so often involved. Weiss³ described a case in which there was a combination of adiposis dolorosa and tabes dorsalis, and Mingazzini¹ mentions multiple sclerosis and amyotrophic lateral sclerosis as present in some cases. Degeneration of the columns of Goll,²² hemiplegia and aphasia have been reported.

7. *The Sympathetic Nervous System:* Many of the writers on the subject believe that some alteration in the sympathetic system plays an important role in the etiology and pathology of the disease, and this is probably so in its relation to the internal secretion. There may be a bluish discoloration over the fatty nodules, and a variation in the size of the masses and the pain in them, due to dilatation and contraction of the blood and lymph vessels. These are vaso-motor phenomena.

8. *Genital Organs.* Pathological changes in the genital organs, usually atrophy of the ovaries

or testicles, have been described in many cases.^{2 3 4 6}

The literature presents many references showing that there probably is some relationship between diseases of the ovaries and testicles and adiposis dolorosa, probably through the chain of internal secretions, which has been referred to before.

9. *The Hemo-Lymph Glands.* These indefinite masses of lymphatic tissue, containing blood vessels, and resembling the spleen in structure, have been mentioned in many of the articles on adiposis dolorosa.^{6 22} Their significance is unknown.

Pathogenesis. Pizarro¹⁶ thinks the pathogenesis of the symptoms should not be confounded with the pathogenesis of the disease. He prefers to think, with Costellino and Pende, that adiposis dolorosa is a *glandular nervous disease*, due to alteration in the functional apparatus, the "sympathetic-endocrine apparatus." Such a disturbance may have a toxic, or a toxi-infectious basis, resulting in the primary nervous lesion, or in a lesion of a secretory gland which affects the nervous system.

Alzona²⁸ after reporting the case of a soldier who developed the disease after prolonged hardships in the trenches, reviews the various theories as to the pathogenesis: the nervous theory, the theory of alteration of the internal secretions and the theory of dystrophia of the sympathetic-endocrine-system. (Pende.) He thinks the last is the most acceptable and best explains the syndrome.

Cecikas¹⁸ believes that the agent in default is the "toning hormone" and the point where the chain of the system of internal secretions is interrupted, is in the reproductive glands.

Many writers on the subject think that the disease is a "tropho-neurosis," though exactly what is meant by this term is certainly not clear to me, nor to anyone else, so far as I know. Weiss³ cites a number of cases in which the relationship of the tumors to the peripheral nerves, especially the symmetric lipomata, present the picture of a "tropho-neurosis," as he calls it. "Tropho-neurosis" is also the theory of Kaplan, Fedotow, Simionesco and Strubing.⁸ Duering⁴ states that anemia plays a part in the etiology by influencing the chemical composition of the fat. The practical points in the pathogenesis are the following:

1. A demonstrable lesion of the thyroid gland. 2. A demonstrable lesion of the hypophysis cerebri. 3. Often disease of the ovaries or testicles. This pathology, of course, means a disturbance of the internal secretions. Further than this we cannot go, except in theory, and for those interested in the theoretical aspects, please consult the references in the bibliography.

PROGNOSIS

The course of the disease is exceedingly chronic and tends to be progressive. (Stanley and Allbutt.) Kraft⁶ says that remissions and exacerbations over a period of many years, are the rule and the prognosis is therefore grave. Persons affected, however, rarely die, but succumb to some inter-current disease.⁶ Klingman¹⁷ and Duering⁴ say that surgical treatment gives only temporary relief and that the disease usually recurs. In the case reported by Hallopeau and Dainville (1914)¹ it ran a course of 28 years.

TREATMENT

The treatment of adiposis dolorosa is most unsatisfactory in the majority of patients, though in selected cases a great deal can be done to alleviate the suffering and discomfort. The cases most amenable to treatment are those in which, 1, the hypophysis cerebri is not involved, 2, where the patients are not too fat, and 3, where the painful and fatty deposits are in such a position and of such a type (the circumscribed or nodular form) that they can be removed. The treatment in nearly all cases should be a combination of medical and surgical measures. The medical treatment may be summed up as follows: (a) Reduction in the weight of the patient. This is accomplished by the ordinary anti-obesity diet and should be most carefully carried out under constant observation by the medical man. (b) Systematic exercises at least twice a day for 15 or 20 minutes each time. Walking 2 or 3 miles each day is of value, as is horseback riding, bicycle riding, golf, etc. (c) Large doses of saline cathartics every 3 or 4 days. (d) Hot baths once or twice each day, preferably after the morning exercises. (e) General massage has been recommended by many, though personally I cannot see how it can be of very great value in the reduction of weight, if the other measures are faithfully carried out. (f) Administration of thyroid extract or some other thyroid derivative. In almost all cases

this has been tried out before operative measures have been adopted. It is, of course, based on the fact that the thyroid gland is involved in the majority of cases and often it has given good results. I saw one case cured by its use in the clinic of Dr. J. B. Murphy. Price² says that while not a specific, extract of the thyroid gland is the most valuable remedy at hand, and several cases have been reported, which have shown marked improvement following its use. Dercum cites one case of cure. Price, himself, saw five cases distinctly benefited by it. Klingman¹⁷ saw a few cases where it gave relief, and in one an apparent cure was effected.

In Kraft's review⁶ of 1907, he states that there is no specific. Thyroid therapy was employed in 14 cases,—produced considerable improvement in 7 and failed entirely in 7.

Renon in the discussion of the paper by Sicard and Berkovitsch¹⁹ states that he in association with Delille observed many cases of Dercum's disease which developed after the menopause. Their patients in addition to ovarian insufficiency, showed thyroid insufficiency and they succeeded in ameliorating the condition by using combined thyroid and ovarian extracts.

The literature contains practically no references as to the use of derivatives of the pituitary body, and only a few, with definite results, where ovarian extracts were used. Sicard and Berkovitsch¹⁹ used the latter with success in cases developing after removal of the ovaries, but theirs were the only ones. The results from these extracts, therefore, may be considered practically nil.

(g) *Other Internal Medication.* Under this heading, anti-specific treatment should be mentioned first, especially in all cases where there is a history of syphilis, or the Wassermann is positive. Price² says that potassium iodide should be given whenever there is a definite specific history. Pio Pasquini³ reported a case in which improvement was obtained by the use of K. I.

The case reported by Pizarro¹⁶ gave a positive Wassermann reaction and was greatly improved in every way by vigorous mercurial treatment. The Wassermann also became negative.

In addition to anti-specific agents, drugs are given mainly with the view of controlling pain, relieving constipation or correcting some intestinal intoxication, which it has been thought might influence some of the internal secretions.

Salicylates, bromides and aspirin have been mentioned by Price.

Local Treatment. I wish to say at the outset that local measures are useless, but nevertheless, shall mention some of those recorded in the literature. Massage of the deposits has been recommended by Spiller and Fere, hydro-therapy by Féré, and light therapy by Kaplan, Fedotow and Kraft. Kraft secured benefit by compression of the fat with bandages, and also had good results following the use of electricity, phototherapy and the x-rays.

Bab²⁵ says that local treatment may deserve special consideration from the fact that where pressure from the shoes or garters occurs, signs of adiposis dolorosa do not develop. He thinks from this, that massage and bandages may be of value, or at least arrest the progress of the disease.

I have found no references concerning injections into the fatty deposits, nerve blocking nor the use of radium, but think from the pathology and etiology of the disease they would be useless.

Surgical Treatment. This may be considered under two headings.

1. Removal of the fatty deposits, and 2, Partial thyroidectomy.

1. Removal of the extremely painful and tender fat deposits or lipomata, seems at once the most logical thing to do, and I think that it is. It should, however, be combined with medical treatment: before or after operation, especially after. This medical treatment should consist of: (a) The anti-obesity measures mentioned above, and (b) the administration of thyroid extract, in cases where the thyroid gland is diseased. To be sure there may be a development of new fat deposits,¹⁷ which will have to be removed subsequently, but this is no serious objection. If the painful masses are removed the patients are relieved of pain for several months or possibly years, the general health improves greatly and the nervous symptoms are enormously benefited, because the source of constant pain and irritation is removed. The operation consists of enucleating the lipomata, if they are encapsulated, or cutting out the fatty masses, if they are diffuse. Care should be taken to remove all of the fatty masses, down to the fascia, but to leave enough under the skin to preserve the nutrition of the flaps.

The operation is usually followed by complete relief from pain and tenderness, and if the medical treatment is properly carried out the prospect for permanent cure should be good.

In the 3 cases herein reported, 2 were operated on after the method suggested above with complete success and remained permanently well, so far as I know. They were observed for between 2 and 3 years after operation. The third one has not yet been operated on, but it at present under preliminary medical treatment.

(b) *Partial Thyroidectomy.* This has been recommended by several writers as a cure for the disease, but why it should have any beneficial effect is not clear, unless there exists a condition of hyperthyroidism. In the case of Mingazzini¹ reported in 1919, the patient had a goiter, about the size of a lemon and a definite syphilitic history, with a positive Wassermann reaction. The thyroid tumor was removed and six months later the general condition was excellent, the fat nodules were less painful on pressure and the spontaneous pain was much diminished. No anti-specific treatment was used. In the first case herein reported, three-fourths of the enlarged thyroid was removed, without any effect whatsoever on the painful fatty nodules.

Case 1. Mrs. L. M. S., aged 43 years, married.

Previous History. Has had 6 children, youngest 8 years, oldest 26 years. No previous illnesses, except "mumps" 6 years ago.

Family History. Mother died at age 55 years. Cause,—nephritis, weighed 220 lbs. There were 14 children in family, 7 of whom are living. One sister who died weighed 185 lbs. Father dead, weighed 180 lbs. before he was taken sick. No neurotic history in family.

Present Illness. Four months after last confinement she first noticed that the thyroid gland was enlarged, and it has continued so ever since, though varying in size.

She first noticed tenderness and swelling, just above the left elbow, posteriorly, one month after the birth of her last child. Tenderness has persisted ever since and for the last two years has been extreme. She has had "sharp shooting" pains in this fatty mass above the elbow. Pains radiate upward toward her shoulder. The tenderness in the fatty mass has been so extreme that, for the last two years, she would faint if the mass was struck, even lightly.

Pain and tenderness are always worse during cold weather and also during the menstrual periods. She is very nervous at all times. Has had membranous dysmenorrhea for the past 21 years.

For the past seven years she has weighed about 182 pounds and is 5 feet 4 inches in height. She

has had occasional loss of memory and periods of great mental depression for the past eight years. She complains greatly of general weakness and marked esthenia. Palpitation of the heart for many years. Perspires excessively on exertion for the past year. Bowels constipated.

Four years ago, two daughters died suddenly, one following the other in a short time. This was a great nervous shock.

Examination. Weight far out of proportion to height. No exophthalmus. Both lobes of the thyroid enlarged to a moderate degree. No bruit or pulsation over the thyroid, which is uniformly smooth and rather hard. Heart, lungs and abdomen,—negative. Above left olecranon process is a fatty tumor, the size of one-half of a hen's egg. No discoloration over it. It is very sensitive to even light pressure and if tapped suddenly, the pain is excruciating. The elbow joint is normal. No other fatty tumors on any other portion of body. Pelvic examination—negative. Urine and blood pressure—normal. Wassermann test not made. The patient is restless and may be described as of the very "nervous" type. Examination of the nervous system—negative.

First Operation. The "goitre" was removed leaving only one-fourth of the left lobe. The pressure symptoms were greatly improved, but there was no effect produced on the painful fatty mass.

Second Operation. Eight months later, the painful fatty mass above the left elbow was removed. It had no capsule and the fat appeared exactly like ordinary subcutaneous fatty tissue. Special stains were used to demonstrate nerve fibers, but none was found. She recovered promptly from the operation and has remained well to the present time.

Case 2. Mrs. M. D., aged 50 years, widow. Seen in consultation with Dr. C. F. Eikenbary.

Previous History. Has had 14 children. 18 years ago she fell on the ice and injured the right knee. No further trouble until five years ago.

Family History. Negative.

Present Illness. Five years ago she began to develop pain and swelling on the inner side of the right leg, just below the knee, and for the past two years this swelling has been very painful to pressure. No psychic manifestations, except mental depression at times. She is quite nervous and has been so ever since the onset of trouble. No marked esthenia, weakness or shortness of breath. Of late there has been some spontaneous pain in the swelling.

Examination. Soft, fatty mass on inner side of right leg just below the knee. Knee joint not involved, as shown by x-ray examination. The mass is about $2\frac{1}{2}$ inches in diameter, rounded on the sides and flattened on the top. It is very tender to even light pressure. No other fatty tumors. The mass on the leg was diffusely circumscribed and the skin could be moved over it. Present weight of patient, 200 pounds.

There was no enlargement of the thyroid gland and no symptoms of hypo or hyperthyroidism. No evidence of pituitary gland involvement. Heart, lungs and abdomen—negative. Urine—negative. Wassermann test—not made.

Operation. By Dr. C. F. Eikenbary, assisted by myself. The fatty mass was removed. It looked like normal fatty tissue and there was no abnormal development of the blood vessels in it. The fatty mass extended down to the fascia. Was in the hospital 7 days.

Three weeks later, because of pain and tenderness in the fatty tissue around the incision, a second operation was performed and a larger quantity of fatty tissue in the neighborhood was removed. There was no capsule. Wound healed by primary union and the patient was discharged cured after three weeks.

After the second operation, thyroid extract in five grain doses was administered and continued for several weeks. The patient remained well.

Case 3. Mrs. J. B., aged 57 years, widow. Occupation—housekeeper.

Present Illness. Five years ago patient fell and struck the left costal arch anteriorly against a pail. About six months later she began to have pain in left upper abdomen, which has continued at intervals ever since. She feels as though there was a "fullness" under the left ribs in front and as though she "must press it back." At times the pain is dull and aching and she must lie down to secure relief. This pain is always made worse by exercise.

Four years ago she first noticed a "lump" to the left of the umbilicus and this has persisted ever since, not growing in size. This "lump" has always been tender to pressure, especially when she leans against a table or desk. The tenderness is sometimes very extreme. At times there is spontaneous pain in the mass, this pain being of a sharp, stinging and burning character.

At present her weight is 154 pounds. She has neither gained or lost.

She is of a very "nervous" temperament, is restless, irritable, despondent and often has insomnia. For the past six months she has noticed a small tender "lump" on the inner side of the left arm, about the middle, and a short time ago noticed a "fullness" in left axilla, which was tender to pressure. She has complained of pain and swelling in joints of the hands for the past two or three years, also in metatarso-phalangeal joint of great toe. For several years she has complained of what she calls "neuritis" in the right shoulder.

First noticed an enlargement of the left lobe of the thyroid 30 years ago. Grew larger slowly for 20 years, and has been the same size ever since.

Previous Illness. Menopause—10 years ago. No trouble then.

Family History. Mother alive; age 84 years; weight 160 lbs., used to weigh 200 lbs. Father alive, age 87 years; weight 160 lbs. Father always of a neurotic temperament. No history of adiposis

dolorosa in family. One brother died of tuberculosis.

Examination. Height 5 feet; weight 154 lbs. Well nourished. Color good. Left lobe of thyroid gland is as large as a hen's egg, and there is a substernal thyroid, as shown by the x-rays. The enlarged thyroid is of medium hardness and lobulated. Slight enlargement of right lobe, which is soft. In the left axilla there is a very tender mass the size of a hazel nut and movable, which feels like a lymph gland. In right axilla there is a similar tender mass, though not so marked. On inner side of left arm, at about the middle, there is a small tender mass as large as a hazel nut. It is extremely tender to pressure. There is a typical rheumatoid arthritis involving all of the joints of both hands. Left shoulder joint is painful to pressure and occasionally crepitus on motion can be felt in the joint. The left suboccipital lymph glands are enlarged and very tender to pressure.

Heart and lungs, negative. Blood pressure, normal. *Abdomen.* A small nodule can be seen $2\frac{1}{2}$ inches to the left of and below the umbilicus. This is extremely tender to pressure and over it there is a bluish discoloration. This subcutaneous nodule expands under the skin, until it forms a diffuse indefinite mass, extending down to the fascia. Its boundary is clearly defined below, but above it merges with the subcutaneous fat. The mass is roughly 3×2 inches in extent, with the inner border at the mid-line. It is clearly a diffuse fatty mass, very tender to pressure. Abdomen is otherwise negative. X-ray examination of the gastro-intestinal tract is negative. Urine, normal. Stools, normal. Blood Wassermann, negative. Basic metabolism, normal. She is now receiving thyroid extract in 5-grain doses tid with marked improvement.

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CAPITAL PUNISHMENT THE PARENT OF LYNCHING

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The recent lynching in Santa Rosa, California, was a "throw back" to the good old days when Judge Lynch was supreme in my native state. The distinguished "Judge" was not only efficient in crime repression but justified according to his lights. He represented the law and order which had not yet come to the Golden State. When once the regular legal machinery had been installed, there should no longer have been either excuse or apology for him.

A lynching is a social "confession." Lynch law proves one or both of two things, viz: A corrupt or inefficient legal system or a community that has no respect for law and order. Communities in which lynching prevails may take their choice of explanations.

Curiously enough, our system of criminal law—even when well administered—is itself responsible for lynchings.

The entire basic theory of our criminal law is, in my opinion, wrong. It puts "the cart

before the horse". Its aim should be the protection of the public only, not the punishment of the individual criminal. Antisocial beings who cannot be made peaceful and useful factors in our social system should be "eliminated", not "punished".

If the reader reflects a moment he will see that my attitude is not a sentimental one and that I hold no "brief" for the criminal. If the basic theory were changed to "social self defense"—and strictly applied—the mortality rate among criminals would be greatly increased. There would be fewer pardons and more derelicts working productively for life. The Mosaic law is out of date.

The public being imbued with the theory that the death penalty should be inflicted as "punishment" for certain crimes, quite naturally assumes that in any case of the kind in which the criminal is not regularly executed the law has failed of its duty. The public further assumes, and always has assumed, the right (which, however, it does not always put into practice) to do the work that the law neglects to do. There is, of course, the further point that the regular death penalty encourages lynching by imbuing the public with the spirit of brutality, which is an important factor in lynching bees. In my *Diseases of Society*, published some years ago, I inveighed as strongly as I knew how against capital punishment.

It is by no means to the credit of civilization that so gruesome a relic of barbarous times as the gallows should still exist. Still less creditable is the invention of an equally barbarous instrument of social revenge, the electrocution chair, representing the application of a greatly increased intelligence to the perpetuation of a horrible custom which is unworthy of the age.

Social revenge is very much out of date. Murderous individual revenge, with which it is but natural to sympathize, was legislated out of court long ago, as a matter of social expediency. It is time that collective or social revenge suffered the same fate.

Lynching never will be done away with until its parent, capital punishment, has been abolished. The suggestion of social revenge by torture and taking human life laid down in holy writ is kept constantly in operation by legal barbarity. Capital punishment is one of the chief factors that keep the tiger in humanity's breast from

being effectually lulled to sleep by social progress. The social tiger loves blood today as well as ever.

It must be admitted that a severe penalty of some kind is necessary to check the murderous propensities that are latent in man, but this in no way establishes the necessity for capital punishment. Statistics fail to show that capital punishment *per se* is deterrent of murder. The crime of murder usually is committed under stress of great emotional excitement, or by individuals who have carefully estimated their chances of detection and punishment. In neither class of murderers does capital punishment operate as a check. The criminal murderer rarely kills unless compelled to do so, and when, in the exigencies of his profession, the necessity of killing arises, he is not likely just then to take the severity of the penalty of murder into consideration. He has long since assigned capital punishment to its proper place in his estimate of the chances that he takes in his business. As criminal law is at present administered, the risk of capital punishment taken by the professional criminal who murders is small indeed.

The murder statistics of those social systems in which capital punishment has been abolished compare so favorably with those in which it still exists that no further argument should be necessary to prove its uselessness. The records of Kansas and Michigan speak for themselves. History shows that in times past, when capital punishment was inflicted for even slight offences, it not only was not deterrent of crime, but increased it by brutalizing the people. The *eclat* of public executions offered to the vain-glorious criminal a suggestion of the means whereby he, too, might occupy for one brief moment the centre of the stage of life.

The non-deterrent effects of capital punishment is shown by the fact that when picking pockets was a capital offense the light-fingered gentry were wont to ply their trade among the onlookers at public executions.

The most illogical feature of capital punishment is the fact that it does not punish. Punishment requires memory; memory demands intelligent life. Memory, and therefore punishment, ceases when life departs. It is about as effective to hang a mentally sound man as it would be to hang an idiot, so far as punishment goes, and, moreover, the one would be as impressive an example as the other.

By far the best criticism of capital punishment I ever have read was fathered by my friend, Opie Read.¹ An old darkey, in describing an execution, said, "Dey done lead dat man up on a platform, jes' like he wuz some pore ole dog, dat dey gwine ter kill. An' de sheriff done read a great long paper ter dat man. Now, Marse John, what did dey read dat paper ter dat man for, when dey gwine ter kill him? Why, he won't know nuffin' 'bout dat ter-morrer."

Here was the light of a simple-minded philosophy thrown on a dark subject. That poor old negro, like some children, was more philosophic than his betters.

Perhaps the most serious objection to capital punishment is the necessity of executioners. How can society reconcile itself to a method of punishment which demands that one or more men should deliberately murder another in order to revenge society for murder committed by that other? Judicial murder is the worst and least excusable form of murder, because it is both deliberate and avoidable. The unjust forfeiture of a life is a crime against society, but the so-called just forfeiture of a life is a crime against humanity.

One of the most horrible features of capital punishment is the danger of executing innocent persons. This is almost as likely to occur in legal executions as in lynchings. If it be proved that a single innocent man ever was hanged by legal or illegal process, the custom is everlastingly damned. Does any one argue that innocent persons have not been executed? Shall we be governed by the principle that it is better to hang ten innocent men than to allow a single guilty one to escape? Personally, I hold the view that it were better to allow ten thousand guilty ones to go scot free, than to destroy the life of a single innocent person. Victor Hugo has vividly depicted the sufferings of the man who waits for the consummation of his own judicial murder.² How much more poignant the anguish of the innocent than of the guilty?

Perjured witnesses in murder trials are not a thing unknown to criminal jurisprudence. Human nature has not changed since, in England, in 1749, Faircloth and Loveday were sentenced to death on the testimony of a perjurer. Faircloth was hanged, and Loveday was about to

suffer the same fate when evidence was brought to light that proved the innocence of both men.

Circumstantial evidence has hanged many an innocent man. Errors in identification must also assume a share of responsibility. The evidence of witnesses of murder, who probably were frightened and excited at the time the deed was committed, is not always to be weighed in the balance against a human life.

The occasional barbarity of executions is alone sufficient to condemn capital punishment. At an execution in St. Louis the rope broke, and it took the executioners forty minutes to get the old noose off and a new one on. Having adjusted the fresh noose, they strung their victim up again. Christopher Merry, the Chicago wife-murderer, was slowly strangled to death. Thirteen minutes were consumed in the process. The amount of bungling that has been done in electrocution is horrifying, although but a small part of it ever has been made public.

The last vestige of a claim for recognition for capital punishment should be swept away by the inequality of its application. If it exists in one State, it should exist in all. If one convicted murderer is hanged, then all should be. What do the records show? Briefly this; that there is a discrimination which selects as the victims of legalized murder from two to three per cent.—varying in different years—of the total number of murderers. The annual statistics one year showed in round numbers about three hundred executions, legal and illegal, as against nearly eleven thousand murders in the United States. In 1895 the proportion of executions was not much more than two per cent. It is interesting to note that there has been a progressive increase of murders in this country of late years, a record by no means complimentary. That there has been a great increase since the world war, is a matter of common observation. That national post-war neuropathy underlies it does not alter the figures.

Capital punishment is a system from which there is no appeal. No court is wise enough to correct its own errors, once its victim is executed. This is one of the most powerful arguments against it. There should be no system of punishment the mistakes of which cannot be rectified.

The records of capital punishment in this country are not flattering to civilization. One

1. An Arkansas Hanging.

2. Last Three Days of the Condemned.

of the swiftest, surest, most inexorable and merciless courts on earth was the old Federal Court at Fort Smith, Arkansas. For many years there was no appeal from its decisions. One executioner alone hanged eighty-eight men. This court was the arbiter of criminal destinies for a number of adjacent territories for over twenty-five years. The Creek nation—where capital punishment was prescribed for comparatively trivial offences oftener than in any other part of this country—furnished more victims for the gibbet than all the other districts within the jurisdiction of the Fort Smith court.

The executioner represents an entire people who, supported by the majesty of the law, have united to wreak the revenge of society upon one poor devil who represents, on the one hand, the foibles of human nature—which are no worse in him than in many of those around him—and, on the other, the errors of our social system. On the ground of public policy, I presume it will be argued that the consciences of judge, jury and executioner should be clear. Unfortunately, however, this is not always the case. A certain judge, who presided over a frontier Federal Court for many years, sentenced one hundred and sixty-eight murderers to death. Considering the atrocious criminals with whom he had to deal, and the semi-savagery of their environment, one might naturally suppose that his conscience remained clear, yet he finally became an advocate of the abolition of capital punishment. On his death bed he cast an anchor to windward and cried, *"I never hanged a man. It was the law!"*

The inequalities of justice were well shown in this judge's own court. During twenty-five years less than ninety murderers were hanged, while during a period of only ten years of that time three hundred and five were convicted of murder, and one hundred and sixty-eight were sentenced to death.

As the law now stands, capital punishment involves the danger of executing the insane. History teems with proofs of this. To be sure, if society must destroy life, it would be far more logical and altruistic to destroy the insane than to hang the sane murderer; the former is by far the more dangerous; but as matters stand at present, the danger of the execution of the insane is a powerful argument against the system. It will continue to be an argument against it so long as there is no arbitrary standard of sanity.

This works both ways. Juries are likely to give sane murders the benefit of the doubt. More injustice.

The social-defense-necessity plea for capital punishment will not hold water. Experience has shown that the life sentence is equally effective as a deterrent of murder. When rigidly administered, it certainly is effective in social protection.

If capital punishment be not abolished, the least that a humane spirit should demand is that the methods of capital punishment should be devoid of barbarity. So long as chloroform, opium, prussic acid and carbonic monoxide are procurable, just so long will the gallows tree and electric chair be indefensible.*

THE LESSONS OF THE WORLD WAR FOR THE INTERNIST (Concluded from Page 85)

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This is apparently dependent on certain general factors having to do very largely with the communication of infections or types of diseases perhaps prevalent in a certain district to such a universal degree that all residents from that district became immunized through having had the infection or through having become vaccinated through constant exposure. When such groups are exposed to groups from other areas, each develops in large numbers the disease but not the immunity which is found in the other group.

This is of course but an illustration of Darwin's law concerning susceptibility. These problems have to do very largely with conditions of crowding, transportation and housing; they have a particularly close relation to over compacting of groups, direct transference and so on. Much information of the most valuable possible character as to methods of preventing such transference has been gathered, too much to be mentioned here.

Another factor which exists to a much more serious degree necessarily in military as compared to civil conditions are the very important ones of physical exhaustion, such as developed under battle conditions, on long hikes, long railway or transport travel and the like. Food inadequacy, or monotony, clothing and bedding deficiencies

*Apropos of recent adoption of execution by gas in Nevada, I will call attention to the fact that I suggested it in my "Diseases of Society" in 1905.—G. F. L.

and a very important factor which has been usually forgotten because of its infrequent group occurrence in civil life, that is the effects of weather conditions. This is a factor overly considered by our predecessors in medicine perhaps, but certainly under considered by us, if we are to judge from its importance as seen under active military conditions. The epidemiological report at Camp Upton for example showed a direct correspondence of curve with the occurrence of sporadic pneumonia, and when the epidemic appeared waves of exacerbation of the disease followed strikingly close to the moisture and cold curve of the weather record. When bad weather and exhaustion are combined, as in battle conditions, there is inevitably a marked rise in the catarrhal diseases of all kinds.

Few civil practitioners consider measles as a disease of serious import. In civil life it is seen for the greater part only in children and if I may judge from my own attitude it has never been considered a matter of more than passing medical interest or gravity. Study of this disease under military conditions has shown it to possess a degree of virulence only to be compared with its severity when it occurs after Darwin's law among primitive and hitherto uninfected peoples. The mortality rate is very considerable, the number and diversity of complications which occur in it and the number of sequellae which develop after it cause it to be recognized as one of the most serious of military diseases.

It is certainly one of the most difficult epidemic diseases to limit under military conditions and its degree of contagion and virulence is so great that occurrence among those who have not previously suffered from the infection approach eighty and ninety per cent. and very many persons apparently previously infected with the disease lose under military conditions their immunity and again succumb to second or even third attacks. Several instances of apparent reinfection inside the space of one year have fallen under my own observation and instances of probable tertiary attacks are also not infrequent. Certain authorities, it is true, assert that one attack confers absolute immunity in measles. Such an intimation is conveyed for example in Vaughan and Palmer's report concerning the incidence of contagious diseases in the Army. It is very true that absolute diagnosis in measles is a very difficult

matter, depending as it does mostly on the character of the rash which in many instances is a very uncertain point, particularly in distinction from that of some drugs and from that seen in anaphylaxis and in German measles, but during the war I have seen absolutely typical secondary cases, quite unmistakable, both attacks arising also during epidemics, hence the possibility of error in this statement I believe to be small.

Identical conditions, of course, also pertain in large industrial camps, in prisons, asylums, at times in schools and particularly in those isolated from large city communities and in which the dormitory system is in vogue. The complications which were seen comprised of course otitis media and mastoiditis which are among the most frequent, bronchitis, pneumonia of both anatomical types, arthritis, meningitis and probably some instances of encephalitis. Nephritis of even fatal severity is by no means infrequent and he who has witnessed an epidemic of measles in an army camp, comes out of it with a renewed respect for the disease, a complete loss of faith in quarantine methods and a far broader knowledge of differential diagnosis from rubella, meningitis, scarlet fever, syphilis, anaphylaxis and still other diseases and conditions which cause skin rashes.

Measles during the World War was particularly fatal and serious because of the frequency with which it was followed by general septicemia and by pneumonia and polyserositis. The broad and incorrect assumption has even been made by certain authorities with a knowledge of military medicine matters confined only to brief inspections and visits to the various camp hospitals that the epidemic of pneumonia of the fall of 1918 was due to the measles, whereas those really familiar with the clinical facts in the case know it to have been but an incident, sequel and concomitant result of many outside or associated conditions prevalent at the same time. Pneumonia at this time of the same type and with the same organisms developed with equal frequency after any catarrhal condition of the upper respiratory tract as after measles, but at this time the high incidence of measles caused it to be the most frequent catarrhal condition of this period.

Undoubtedly to most internists as it was to me, the relatively low virulence, occurrence and contagion rate of scarlet fever as compared to measles notably was most surprising. This held true even when one included the complications

which we in civil life usually find so much more serious and frequent in scarlet fever rather than in measles. .*

In both conditions it was soon shown to the satisfaction of most clinical students that early hospitalization, segregation of cases and rigid isolation of the developed cases one from another were means productive at once of a lowering of complication occurrence and virulence of an infection, but with little effect in checking the spread of the epidemic. There is no question in my mind but that confining cases to cubicles, masking of attendants of all grades and as rigid quarantine methods as could be enforced at once cut down the occurrence and violence of the complications of the diseases. In other words, complications were in large part due to the transference of mixed infecting organisms from case to case and there is no question in my mind but that this transference took part largely through too early intermingling of convalescents and to some extent from the hands and infected throats of attendants. The wisdom of the Surgeon General's order requiring prolonged hospitalization and segregation of convalescent measles, cannot be too highly recommended, expensive as it was in point of hospital beds at that critical time.

A quite different condition of affairs was impressed upon me by the truly enormous number of cases of mumps seen in the army hospitals. Unfortunately the imperative conditions of the service were such that little productive research was possible and since practically all persons capable of such work were enlisted in some form of more insistent war work at the time, our real knowledge of mumps has been but little advanced.

Like measles it was highly infectious and contagious and reinfections were common. Very many of the cases investigated by me at Camp Upton, from which I reported 1,096 cases, were undoubted instances of second and even third infection and the impression was borne in on us that the disease seemed to be in some respects a local one of racemose gland infection rather than one in which a general immunity was conferred. It was relatively frequent that cases of monolateral mumps several weeks thereafter were returned to hospital with an involvement of the other side. In a few probable instances the first gland noted as involved was the sexual one, and subsequent involvement of the salivary group took place. This statement of course necessitates a

much more careful observation of the case before hospitalization took place than was possible under the military conditions existing with us but the clinical possibility of such a course is very important. With us a very high percentage of cases of epididymitis in association with the customary orchitis developed and this apparently without relationship to whether or not the patient had previously suffered with an epididymitis.

Although cases of mumps did not remain for a long time with us after convalescence and it is therefore impossible to state as to the real frequency of testicular atrophy and curiously when it did develop, there seemed to be but little direct relationship to the apparent severity of the original lesion. Death from mumps was very rare with us, and complications outside the usual, which included a few instances of mastoiditis were but those long known to be prevalent in mumps.

Although epidemic cerebrospinal meningitis has been a frequent subject of study for a long time, I believe that the studies brought out during the war have very materially increased our useful knowledge of the disease. Although perhaps not so frequent as was the case in many other wars and with only small epidemics, for most cases appeared sporadically, we certainly had a much lower death rate than has previously been the case, doubtless chiefly because of our better understanding of the disease and because of the intraspinal serum treatment now universally employed. As a general thing the virulence of the infection did not appear to be high. The disease was however, very much more frequent than in the civil population of the same locality and it still rightfully retains its precedence as a typical military and naval disease for as in former wars it was a frequent condition in the transports and in the naval hospitals as well as in the military camps.

There is, perhaps, no disease with a more mysterious method of spread and manner of inoculation. There is very great difficulty entailed in the segregation of carriers and even in their detection. Isolation of contacts is, under active military condition, an entire impossibility and the mere segregation of contacts even oftentimes quite impossible because of the fatal loss of duty men under insistent military requirements. It remains yet to be proven that carriers are a frequent or the most important method of the spread

of the disease and if it be attempted to hold all carriers in absolute quarantine until negative to careful culture a tremendous amount of tedious laboratory work is required and a very large group of efficient soldiers must be kept out of the line. Meantime it is quite certain that carriers rarely themselves develop the disease. Certainly the war has not added to a more satisfactory knowledge of the sanitation and quarantine control of the epidemic features of the disease.

Quite the contrary is however true of the treatment and perhaps also of the personal prevention of the disease, largely as the result of studies inaugurated or developed by Dr. Herrick. Herrick called attention to the fact that almost without exception symptoms of a general septicemia precede meningeal signs in the development of the clinical cases of epidemic cerebrospinal meningitis, and he demonstrated beyond question that intravenous injection of the serum gives most excellent results, usually curative if given before cerebrospinal symptoms have developed. Only slightly less benefit is won if the serum be given soon after symptoms of meningeal involvement have appeared. Even in well developed cases the intravenous serum treatment in association of course with intraspinal introduction of the appropriate serum gives excellent results—incomparably better than when the intraspinal method alone is employed.

I was able to substantiate these statements in my management of the disease and I am deeply impressed with the fact that the disease is, as Herrick states, elementarily a septicemia and that treatment along these lines gives much better results than otherwise. It has been possible to demonstrate by blood cultures the existence of meningococcus arthritis, pneumonia and the like, and in many if not most cases of cerebrospinal meningitis a septicemia is demonstrable at some period of the course. The rationale of the treatment is therefore well based and though it is but rarely in civil practice that we secure these cases before cerebrospinal symptoms have been manifested, in many if not most instances intravenous combined with intraspinal treatment is certainly indicated. I must also add that in so far as I have been able to determine, intravenous specific therapy fails to have any beneficial effect in clearing up carriers.

In France, partly as a matter of expediency and partly because during drives, surgeons were

occupied exclusively with the imperative work of the operating table the treatment of the shock cases was detailed to the medical men and in most instances to the service of specially trained shock teams, for the greater part headed by an internist in contradistinction to a surgeon.

Whether or no we are prepared to accept the theoretical basis on which the special type of treatment so well worked out by the British physiologists and further elaborated and clarified by Dr. Cannon of Harvard and his associates, there can be no question that in its results the methods of treatment far exceed in efficiency anything heretofore devised for the management of cases, all manner of shock, whether it be from loss of blood, from terrific laceration and contusion of tissue or from the severe exhaustion incident to battle activities.

The essential of this treatment was the application of heat, applied externally by a simple apparatus, materials for which were obtainable almost any place, immediately at the dressing stations or in the field and evacuation hospitals. The administration of heat and fluid, hot drinks, enemas and the like and in a large group of cases, notably where loss of blood or severe contusions and lacerations had taken place by the transfusion of citrated blood or by the substitution for it when considered impractical or undesirable, of saline or the much discussed gum-salt solution.

Cases too deeply in shock to permit of needful operative treatment or of early evacuation were submitted to these treatments with wonderful success so that needful surgery was usually possible within a few hours. The same methods of treatment were also applied though usually in much modified form in instances of exhaustion from exposure, excessive strain, mental and physical, and from lack of sufficient food and water. Many of such instances who had suffered in addition minor wounds would have been quite hopeless without this preparatory treatment which fitted the patient for evacuation over long, rough and congested roads back to a point where transportation or hospitalization was possible. The training of these teams was under the supervision of Colonel Siler and Dr. Strong, and physicians were put through courses of instruction well calculated to fit the student not only to carry out the method in full details, but to adapt it to individual needs, and they were also equipped with a sufficient theoretical comprehension of the condi-

tions present in shock so that treatment could be modified to suit the conditions present in any special instance. There can be no doubt whatever that these teams and methods saved a very large number of lives, it has also through the multiplicity of cases so treated given a very broad understanding of shock in its various forms so that I feel that the entire subject has been tremendously clarified, both theoretically and practically. I am glad to find that very many civil institutions are now fitted to carry out this method of treatment.

Perhaps this lesson has been of more instructive value to medical rather than surgical men for in civil practice it has so happened that most cases in shock have fallen to the province of the surgeon. In the past there has been, I am certain, in many instances a very inadequate comprehension and treatment of these cases, many instances of which arise in medical as well as surgical practice as in the shock after hemorrhage in typhoid, in duodenal or gastric ulcer, the exhaustion after the severe infections, the toxemias of nephritis, acidosis, diabetes and the like.

I purposely omit any discussion of the theories of shock as a result of which this treatment has been built up, for the reason that while one may question the theory none familiar with the general design of the treatment and who has witnessed its splendid results can question its effect. I feel that the theory propounded for shock on the basis of a toxemia is wanting in many respects and that it fails to explain the signs and symptoms of many cases of shock, but this is but a small matter when we consider the brilliant results which the treatment yields us.

Trench fever, no new disease by any means, but one which has not probably been previously fully differentiated in military medicine from typhoid, paratyphoid, dengue and malaria, has in this war been put practically on the satisfactory preventive basis of yellow fever. The specific organism has not yet been identified, yet from a practical, sanitary standpoint a very satisfactory basis of understanding has been reached. It is a persistent recurrent febrile condition characterized clinically by great depression and exhaustion, by its tendency to recur and from the patient's viewpoint mostly important because of the agonizing pains which appear particularly in the long bones and in the longer muscles and their insertions. Before its manner of transmission had been dem-

onstrated it was one of the most important medical military diseases because of the large number of soldiers which it incapacitated for long periods from duty. As soon as scientific attention was directed to the problem, it was quickly shown that it was transmitted through the agency of lice, through the bite of these insects or more frequently by inoculation of the contaminated feces of the lice through scratch abrasions. The investigations of the British and later of the American Commissions appointed for the study of the condition agreeing as they did on the chief points of the question it needed but little research and experiment to determine that with the frequent elimination of lice the disease itself became eradicated. This was brought about by the institution in all the combatant armies of delousing stations which afforded at frequent intervals the luxury of a hot soap bath followed by the issue of clean under and outer clothing. The result was the practical eradication of the disease so that when the American troops were called into action at the front, the loss of service days because of this disease was reduced to a minimum as a result of the full adoption of these methods. It is more than probable that other diseases, notably typhus, is also so prevented and no doubt additional benefit was also conferred by the bath itself which afforded the soldier not only the great luxury and comfort of a bath but clean clothing also from which the lice and other vermin had been removed by thorough sterilization. The method is not an expensive one either in time or equipment and can be readily applied in prisons, agricultural and industrial camps of all kinds most effectively. At the same time it saved the soldier a considerable amount of time which otherwise would have necessarily been spent in the washing of his own clothing, a thing often quite impossible in the stress of fighting even in the so-called rest camps.

One must not leave the consideration of the strictly professional gains to medicine as a result of the war without remarking on the full demonstration of the almost complete protection afforded against tetanus by the use of the prophylactic injections. Most of the soil over which the battles were fought was highly infected with tetanus bacilli, mostly of course in the highly resistant spore form. Before the introduction of obligatory prophylactic inoculations with the antitetanic serum in every wound case, the num-

ber of cases of death from tetanus was very considerable. So efficient was the method and so rigorously was its administration enforced, that by the time we were in the war, tetanus had become rare.

Most of us have been much surprised at the very unimportant role which diphtheria has played in this war. Almost no epidemics of any considerable moment have occurred either here or abroad, and the use of the antitoxin, both therapeutically and prophylactically, has been so very successful that we are justified in concluding that diphtheria is no longer a serious military disease. The value of the Schick reaction in detecting immunes is very great and saves a great deal of labor where minor epidemics appear.

Considerable comment and speculation has developed because of the fact that from the standpoint of disease the Expeditionary Army was strikingly more fortunate than that in the home camps and the further assumption appears well founded that the disease and disability rate, except from war trauma, was less in the fighting army areas than in the S. O. S. and in the advanced zones. Vaughan and Palmer account for the greater percentage of disease in the home troops because their vital resistance was reduced by the transition from civilian to army life. "The rates for the Expeditionary Force are low because the new recruit and the weaklings do not go to France. The weakling is weeded out before he leaves and the new recruit becomes a seasoned soldier by the time he sails. The hardships of war and trench life, therefore are of less consequence in making armies free from disease than is the admission of new recruits to the ranks."

These same factors probably account for the greater immunity of the soldier at the front from disease as compared to his comrade in the S. O. S. Dr. Salmon, then at the head of the psychiatrists of the A. E. F., is responsible for the statement that never before in the history of the world had so carefully a selected group of men been gathered together for any purpose and never before had any large group of men shown so low a percentage of failures morally, mentally or physically. No church, college or other institution of any considerable size has ever been so free from venereal disease, insanity, crime and so united in thought and act. May I add that I believe no

great body of men ever entered their purpose more determinedly or conscientiously, and none more effectively acquitted themselves. As a leader in our profession has said: "It has been a great privilege and honor to have served these men."

To me one of the most remarkable revelations of the war has been to find that very many of our colleagues have, mostly to their own great surprise, very considerable ability as executives. Dr. Frothingham of Harvard, whose ability as an internist we all know, was named to me by a regular officer of high rank as the most efficient hospital commander of his acquaintance. Abbott of the University of Pennsylvania commanded a hospital with signal success, so did Joseph Miller of Chicago, Marshall Clinton of Buffalo, and many others who have in the past been known only for their scientific attainments. My experience in these matters has been that those medical men most efficient in their profession have also shown themselves very proficient in their command of men and institutions. To me this is a great lesson which confirms me in the belief that we should as a class pay more attention to system, organization and to the executive features of our hospitals. These functions are now for the greater part assigned to either simple laymen or to medical men whose interest in medical matters is far from a high professional standpoint. Perhaps some of you have felt the very great contempt with which the board of managers frequently holds the Medical Board. This I believe is simply because we have been content, perhaps for selfish scientific reasons, to permit laymen to direct our hospitals. I am fully convinced that a few moments of the skilled medical man's time each day would immensely improve not only the professional work in our institutions but would place medical control where now lay control often minimizes and cramps the real professional needs and purposes of our hospitals and other similar institutions. This can be brought about without unduly hampering the time or scientific work of our best professional men and it will inevitably result in better institutions, better professional spirit in them, and so in the end better serve the public and the science. We have too long in this country permitted the idea to pertain that Doctors are good for nothing else, that we are impractical idealists, uneconomical and impossible from the executive standpoint. The war exper-

ience has shown all this to be traditional error only at the very most.

Another point which has greatly interested me has been the far more satisfactory structure of the military hospital as compared to the civil institution when cost per bed and efficiency of operation are taken into consideration. To my mind the general construction of the camp hospitals at home were far superior to that of any civil institution when the cost per bed was considered. This presupposes of course that the cost of land is not prohibitive and that the single story pavilions can be constructed of brick or cement in a permanent way. Where hospitals are built for their purpose as hospitals and not as architectural features, they should be constructed as cheaply as consistent with durability and service. The single story pavilion system appears to be this and if as in the Army Base Hospitals these buildings are constructed as integers so that in epidemics they may be promptly converted over for that purpose or closed when the service falls off, building by building, the best and most economical end is accomplished, the comfort of the patient is assured, but the cost per bed permits of larger and more economically managed institutions. This being the desideratum, all other money may be invested in the best equipment possible, the best beds and drugs, the best nursing, the best instruments, the best and most generously supported laboratory departments with money for research and investigation, in other words the money is spent first for the patient, and next to further the professional side of the institution rather than to gratify the architect, the beauty of the landscape or the pride of the Board of Managers.

I have found the wards of the typical camp hospital sufficiently well converted into private rooms by a well constructed cubical system or by the erection of temporary partitions, if necessary, made of Upson board. Thus observation wards, contagious pavilions, work rooms, drill rooms and assembly rooms may be quickly and most satisfactorily constructed or adapted without more than nominal expense and without altering the permanent structure of the wards.

Since my return from the service I feel that I have been guilty of neglect of duty in the past in taking so little interest in hospital matters beyond the mere conduct of the professional work in my wards. I feel that by giving more attention to general matters we can greatly further the

benefit of the patient, the cure of his disease and make more extensive research and investigation possible and all this without in any way lessening purely professional interest or duty.

In conclusion I wish to summarize the general lessons which the war has given me in addition to such detailed professional opportunities and advances as I have mentioned but in very small part.

I would place first and as of the most importance the tremendous benefit which has been granted in the opportunity of studying disease in enormous groups. As second has been the unusual opportunity of studying disease in relation to the environment in which it develops and in its very early and pre-hospital stages and types. A remarkable opportunity to gain a working concept of epidemiology and its relation to sanitation has also been a great help to me. The study of the relation of disease to locality, weather conditions, to the physical conditions of life, the food supply, clothing and bedding, the great advantage of regulated training, both as a preventive and as a curative measure in disease, has given me an altogether broader therapeutic outlook. To renewal again of a primitive and proper desire on the part of the physician to first save and alleviate the lot of his patient has been the dominant desire on the part of the medical officer, for I have never before seen physicians of all grades from the the executive office and laboratories to the dead house so imbued with the desire to serve the patient as I have witnessed during my war service.

Finally, I believe that war medical service has given us a new optimism as to our country and a new insight and a better understanding and appreciation of men.

May we serve them better as each year passes, and may the lessons of the war never be forgotten.

THE CURE OF CERVICAL ENDOMETRITIS BY THE AID OF MULTIPLE SCARIFICATION*

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Cystic degeneration of the cervix uteri is curable only by destruction of the degenerated glandular tissue. Cutting operations except in the advanced cases involve the removal of functioning mucosa. Deep or radical cautery does the same, although less extensively, and is fol-

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lowed by a more or less harmful cicatricial contraction and deformity.

When the cystic degeneration is limited to a part of the vaginal portion, or to small scattered areas, the desideratum is to destroy only the cysts and degenerating glands. Even when the cystic degeneration is quite extensive the patient may for pressing reasons insist upon trying treatment, or she may be a bad operative risk on account of diabetes, hyperthyroidism, heart lesion, etc. Hence there is a legitimate field for conservative treatment of chronic cervical endometritis with cystic degeneration provided it can be made curative instead of merely palliative.

I have not had any experience with electropuncture although I believe that its efficient use would destroy more functioning mucous membrane than necessary. The ordinary local treatment, consisting in the puncture of follicles as they become palpable or visible and the application once or twice a week of tincture of iodine, usually results in failure unless it is continued throughout the remainder of the patient's menstrual life time, when nature will come to the rescue by causing senile atrophy of the cervix.

The treatment I am advocating is not new. It consists in using the old treatment in a way that makes it efficient. It is a speeding up and intensification of the puncturing and local stimulation. The puncturing of follicles becomes a multiple deep scarification and the local stimulation becomes a semi-cautery. Instead of using the scarificator only when cysts are discovered, from fifty to a hundred punctures into the diseased area or areas are made at short regular intervals, viz. from once to twice a week. This not only evacuates follicles that cannot be felt, but it makes openings into the infiltrated area about the follicles into which the antiseptic and stimulating application can penetrate. The application is strong enough to destroy or cause atrophy of what remains of the epithelial cells in glands that are already seriously damaged by inflammatory action, but is not strong enough as I apply it to destroy functioning glands that are supported by an unobstructed capillary circulation.

The scarificator I use is bayonet pointed and cuts in three directions, and thus leaves patulous openings for the escape of mucus and the penetration of the solution. The solution consists of one part each of iodine crystals and glycerine

and two parts of phenol. For an area of almost complete degeneration I double the relative amount of the iodine in order to obtain quicker and somewhat more radical results. The only place where the stronger colution can do harm is at the edge of the cervical cavity where the mucosa will become reinverted, and where we want to preserve the columnar epithelium.

The technic I employ is quite simple and can be carried out at the office. After wiping the vaginal fornices, cervix and cervical cavity dry with absorbent cotton I disinfect them with a five per cent. solution of phenol in water. I then make five or six punctures into and about each retention cyst that can be seen or felt, and also into any red spots or areas that indicate destructive inflammation of glands or obstruction of follicles. I then press absorbent cotton firmly against the surface to express mucous plugs and stop the bloody oozing. Then with an applicator which is tipped with a tuft of non-absorbent cotton I apply the solution freely to the scarified areas and to the mucosa both of vaginal portion and the cervical cavity, and press the saturated tuft of cotton firmly against the parts in order to force the iodized phenol into the glandular pockets and punctured tissues. I arm the applicator with non-absorbent cotton because it holds the solution better than the absorbent does. A dry tampon is placed against the cervix for the patient to remove in a few hours. I sometimes begin the treatment by dilating the cervix slightly with a large sound. This not only stretches the mouths of the glandular pockets within the cervix, but expresses much of the tenacious mucus. The treatment is repeated every three or four days until no cysts can be seen or felt. I then settle down to the following routine procedure once a week for three or four months. From fifty to a hundred or more punctures are made in the cystic area or areas followed by the application of the iodized phenol, with or without the previous passage of the sound. In this way the superficial cysts are destroyed, deeper ones become accessible and it is possible to evacuate all of them and secure the penetration or absorption of a large amount of iodine. After all signs of inflammation and cyst formation have disappeared I discharge the patient with directions to return at the end of three or four months. A few treatments may then be required for the cure of glands that had been infected or affected

previously but which had not been in evidence.

The weaker solution seldom penetrates the glandular pockets of the unscarified cervical cavity in sufficient quantity to injure the epithelium, and as the columnar epithelium of the parts exposed in the vagina must be destroyed or converted into the squamous variety it does no harm. The stronger solution is liable to raise a blister if not thoroughly wiped off before placing the tampon. I have had that take place a few times but without deleterious results. The leaving of medicated strips of gauze in the cervical canal or against the cervix is not, I think, as efficacious as the intermittent iodized phenol application, for the active septic stage has usually passed and an interrupted stimulation or semi-cautery rather than continuous antiseptis is called for.

This treatment is a protracted but not necessarily a tedious one. On account of the monthly interference of the menstrual period, the patient, except at the beginning, gets only three treatments a month, and is not even prevented from attending to her ordinary active duties on treatment days.

I do not know whether vaginal douches assist very much except in a cleansing or aseptic way. I usually order a strong solution of chloride of sodium or a 1/2000 solution of potassium permanganate or of zinc chloride once daily.

In conclusion I wish to repeat that I am not advocating such treatment as a substitute for trachelorrhaphy or trachelotomy, but as an alternative in cases in which such operations are not available or advisable. It is the treatment of choice only in cases in which there is moderate cyst formation or in cystic degeneration confined to a limited area. My object is not so much to extend the field of local treatment as to increase its efficiency when it is employed.

INSANITY—A QUANTITATIVE DIAGNOSIS*

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From out of the past the condition knows as insanity comes to us surrounded with many mysteries. History is rich with mystical lore regarding people whom we call insane. During the height of ancient Greek power, the ecclesiastical group dominated the arts and sciences. At

this period, the idea of demoniacal possession held sway. Passing down the ages we come to the early days of our own New England states. Here we read the stories of the witchcraft of Salem. These ideas were little changed from the ideas held by the ancient Greeks.

In the days of not so long ago the quantity of an individual's abnormality was given little attention. Great stress was laid on the hallucinatory experience and the delusional trend. It mattered little regarding the reactions to false perceptions or conceptions. Just as long as the individual exhibited a changed behaviour reaction, incarceration was considered the proper procedure.

Few medical men realize that what insanity is simply more extensive behaviour reaction to stimuli than usually exists. Under certain modes of living and in different climes what may seem strange in one place will go unnoticed in another. All of us pass through variations in modes. Grief, sorrow and happiness all play a part in our lives. At times we are quite talkative; then again for one reason or another we become glum. So according to our mood and the reactions to the same our mental standard is interpreted by the environment in which we live.

The great war taught the medical profession many things. The neuro-psychiatric branch of the army soon learned it was their duty not only to weed out the misfits but to return as many men to the firing line as possible. So it is with those having the responsibility of caring for the mentally afflicted to judge of the quantity of abnormally mental states and return to civil life as many individuals as conditions warrant.

We must realize how much we owe society and those who show a mental change. Our duties while at peace are just as important as the neuro-psychiatric branch of the army was during war time. The quantitative content of mental reaction must be studied more than the qualitative when considering the individual from an economic standpoint. Experience has taught us that one can make good under certain conditions if given the chance regardless of the existence of hallucinosis or delusional experiences.

The public must be educated up to this standard of viewing mental states. Not only the public but those who are doing special work such as social service workers, charitable agencies and special court officials must train themselves to

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view insanity from its quantitative standpoint. Again the economic value of the individual must be considered.

The qualitative and quantitative factors of one's mental makeup must be given as close study as the same factors when applied to departments of science. It is not enough to state that an individual has a false idea but we must ascertain how much this false idea interferes with his adjustment to affairs of life.

We realize during the acute stages of a psychosis, the individual must be removed for a period from his environment. As time passes, changes take place in the reaction to hallucinosis and delusions. A state is usually reached when returning him will be of benefit to the patient. While he may still hallucinate or possess some false ideas, it will not interfere with his economic value to himself and his family. If we always hold to the old idea that all who enter the door of a hospital for the insane are doomed forever and a day the commonwealth will be taxed far beyond the endurance point. Institutions great enough cannot be constructed to give them housing room.

Experience has taught us that many can be returned to their former stations in life. Not as cures—we do not claim such a condition from a medical standpoint. Some cases leaving the sheltering walls of a hospital cannot stand the stress and strife of the maelstrom. Sooner or later they break down and must be returned. The number who can remain out and battle with life more than repays the effort made in giving a human being a chance once more.

I call to mind a patient who had been a hospital resident for some years. As time progressed he became quiet, industrious and was trusted with what we term a parole of the grounds. He possessed some ideas regarding his wife; hence his parole home was not considered. The wife visited her husband very little while he was in the hospital. She was able to make a living for herself and also took advantage of his mental mishap by applying to the county for aid under the widow's pension fund. Other relatives however, were not so negligent. His mother and brothers were devoted visitors at the hospital; once in a while they would ask if the man could be taken home, but as the wife did not seem anxious for his release, little attention was given these requests.

One day, however, the patient went A. W. O. L. The Sunday following, he reappeared at the hospital and reported that he had secured employment at his old trade, his wage being sixty-five cents an hour. The man was well dressed and quiet in demeanor, said little about ideas he had formerly expressed, so it was considered advisable to parole him. He was told that if he would return the following Sunday with some member of his family, the proper papers could be made out. This he promised to do.

The Friday following his appearance at the hospital, a 'phone message was received from a probation officer of one of the courts complaining that the man was not supporting his family. She was very much exercised over the fact that if the man remained out, the wife would lose her widow's pension. She did not consider the man's mental state at all. Advice was given that the man should have a chance to get started again in life.

The advice, however, was of no avail. That evening while returning from work he was taken up by detectives, sent out on the advice of this probation officer and placed in the Psychopathic Hospital.

If these over-zealous people would only look at mental cases as they should be today, such an injustice would not have taken place. The man had no time to make any arrangements to look after his wife's welfare. Happily, however, an adjustment of his affairs has been brought about so he is now being given a chance to make good and the wife supported.

The mentally ill should not be classed with criminals. In all my years in caring for this type of sickness, I can recall only a few cases which have caused any damage to person on being returned to civil life.

A number leave the hospitals for the insane yearly, never to return. They are able to fill their place in the sun and relieve the state from an economic standpoint.

As time progresses, the newer view of summing up mental states will be grasped by the public and much of the mystery and glamour that has been attached to what we call insanity will be ancient history.

Before we can reach the public with these teachings, the medical profession will have to come to an understanding that this mental state is only a behaviour reaction little removed from

what society calls the normal standard. It is not an infrequent sight to see crowds gather about the buildings of a hospital for the insane and gaze upon the inmates with curiosity. With a proper understanding of conditions, this morbidity would disappear. There should be no more mystery attached to this form of illness than any of the bodily ills. Physicians themselves, as a rule, show as much curiosity regarding the insane as a layman.

During the college course, psychiatry has been looked upon as a side-line. A few brief lectures with a visit to some nearby hospital during the senior year constituted the instruction in this branch. After graduating the general practitioner devoted attention only to such cases as came up in his order of business. He recognized changed behaviour reaction and recommended hospital care. Physicians in general practice should realize that the insane are not lost from civil life forever. As stated, a patient after he is able to leave the hospital may take up life where he left off.

Another agency which should view mental trouble in a quantitative light is the press. If efforts of the newspapers were directed in the line of reconstruction and not the sensational regarding the insane, public ideas would begin to change. Elopements will take place from hospitals for the insane because of our liberal and humane, policy of giving as much freedom and liberty as is compatible with public safety. The press will criticize the management for such. If their editorial efforts were turned in the direction of what becomes of such patients they would be surprised. These elopements take place in patients who have become homesick.

Again through training they may have become proficient in some line of duty and the mental status overlooked. After repeated requests to leave have received no attention, some may take it upon themselves to go without permission; or, contrary to the advice of some member of the medical staff, parole may be granted.

This is only a natural condition. On arriving at their homes, if the other members of the family use a little diplomacy, adjustments can be made in many cases whereby the patient will secure work and become of economic value.

One young man I well remember, possessed many ideas that were thought incompatible with civil life. To use a slang expression, a "long

shot was taken" and he was placed in the outside world where he has made good. He still entertains his old ideas but they do not interfere with his daily life. Another case was that of a man who was considered to have organic brain disease. Owing to letters written to the hospital by his wife, ground parole was denied him. He had proven himself a good worker in the meantime. From time to time, a little liberty was given. Finally one day he eloped. Nothing was heard from him for some time. One day he returned to the hospital accompanied by one of the officials of his union. The man was making good as a master brick layer and was conducting himself in such a manner that a final discharge was granted. An old time printer whose mental state exhibited the scars that alcoholism carved on his nervous system frequently returns to the hospital and proudly shows his bank book. This man is making more money than the most members of the medical staff.

So it goes. Investigations of many cases thus leaving hospitals for the insane prove that adjustments have been made satisfactorily to all concerned. An individual who has shown a changed behaviour reaction oftentimes easily fits in with his old environment, contrary to the prognosis of the most conservative medical men.

This changed view of the condition we commonly call insanity has come on slowly. It has not been the result of some of the kaleidoscopic turnovers we see taking place daily. It is the outcome of experience and common sense applied to our fellowmen.

In conclusion, permit me to impress upon the medical profession when dealing with people who have left institutional life to remember the golden rule and help give their fellow beings a chance to share in what little pleasures are left for them in life.

INJURIES OF THE SPINAL CORD*

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Observations made upon the enormous material afforded by the late war have permitted a revision and correction of many erroneous conceptions of

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the pathology, physiology and symptomatology of the nervous system. Of particular importance has been the knowledge obtained from a study of the injuries to the spinal cord. Unfortunately the American neurologists were afforded but little of cases of spinal cord injury because of the enforced lack of provision of neurological hospitals in the field of operation. However, a sufficiently large number of observations have been made to permit us to concur with the conclusions drawn from the study of the material of our allies.

Grossly, injuries to the spinal cord may be divided into two classes; those occurring as a result of a direct trauma to the spinal cord, as by a missile, a splinter of bone, concussion or contusion and those due to indirect lesions, the result of compression, edema or a spread of infection. The symptomatology resulting from injuries to the spinal cord is the same whether the lesion is produced by high explosives, machine gun bullets or other missiles.

In the study of the pathology of injuries to the spinal cord, attention has been drawn to several misconceptions. Although hemorrhages and thrombi abound at the level of the injury, and to a distance of one or two segments above and below, a true hematomyelia is a rare occurrence. Far more frequently is there found cavity formation as a result of actual necrosis not based on a vascular pathology. The cavities are small, numerous, disconnected, scattered freely throughout the white matter; neither occupying a predominant position in the gray matter nor connected with the central canal.

Particular importance is to be placed upon the relatively frequent observation of severe injury and, at times, incomplete section of the spinal cord, with an intact dura mater. Of some clinical importance is the observation of lesions occurring at a considerable distance from the level of the injury. In cases of complete section of the spinal cord, it has been observed that there are two types of changes in the lower segment which are fairly characteristic. Special attention has been called to them by Lhermitte, who without so designating them, describes what is known as axonal degeneration in the cells of the anterior horn, particularly in Clarke's column.

These are the changes observed when the axone of a cell has been severed and are found in cases of peripheral neuritis, central neuritis and pella-

gra. Another very consistent change extending throughout the length of the lowermost segment is a glial and ependymal cell infiltration about the central canal. Contrasted to these changes, the upper segment shows for a considerable distance, the well known Nissl changes in the ganglion cells and an absence of pathology about the central canal. Intrathecal hemorrhages followed by clot formation about the cauda equina, undoubtedly are the explanation of certain atypical reflex changes. It should be emphasized that in the lesions produced by warfare, the spinal cord is not the only structure that suffers damage and the prognosis and course is influenced to a great degree by concomittant injury and inflammatory reactions of the pleura, lungs, pericardium and at times, the abdominal viscera.

As in the case with peripheral nerve lesions, a complete physiological interruption of the spinal cord cannot be differentiated from a complete anatomical one. Both are followed by complete paralysis in the muscles supplied by nerves originating below the level of the injury. In both, complete sensory loss results below the level of the segment and the reflex changes and bladder disturbances may be similar. It, therefore, becomes necessary to develop a method for the recognition of incomplete lesions. Although many cases of incomplete anatomical lesions of the spinal cord show complete physiological interruption, a large number may be recognized by only partial paralysis of the muscles below the level of the lesion or by preservation of one or all types of sensibility. When this is the case, the indications are usually clear. When the loss of motion and sensation is complete, the problem is more involved. Prior to the war, the almost universal acceptance of Bastian's law to the effect that following a complete transection of the cord, flaccidity was present and all reflex action lost, had seemed to afford a method for the easy recognition of this state. Recent observations, however varying, have shown definitely that this law is untenable.

It has been shown that the symptomatology following a complete transection of the spinal cord may be divided into three stages. First, the stage of muscular flaccidity, corresponding to the period of spinal shock, in which state the paralyzed muscles are toneless and flabby; all reflexes, superficial and deep, are usually absent

with retention of urine and feces. At times retention of urine and incontinence of feces has been observed and at times, the cremasteric and bulbocavernosis reflexes have been elicited. The second stage, the stage of reflex activity, begins with the first reflex response to an external stimulus, usually from the sole of the foot. In the full development of this stage a stimulus applied to any part of the lower extremity gives rise to a flexion reflex of the hip with adduction of the thigh, of the knee and of the ankle. When reflexes can be evoked with ease, an extensive and widespread reflex action can be obtained which has been called a "mass reflex". This consists of a flexion spasm of the ventral abdominal wall and of the lower extremity, evacuation of the bladder when its contents accrue to a certain amount, and sweating from an area of the skin in the paralyzed region. One of the most receptive fields for exciting reflexes is the genital area; the cremasteric, dartos, bulbocavernosus reflexes and erection of the penis being common. During this stage, in some cases the knee and ankle jerks can be evoked. Under favorable conditions, an automatic function of the bladder and rectum may be established usually in the third week. This reflex is initiated when the bladder or rectum becomes distended to a degree differing in individual cases and conditions. It can be increased by eliciting a mass reflex and artificially produced by the injection of varying amounts of fluid into the bladder. The third stage, that of gradual failure or reflex functions of the isolated spinal cord, usually preceding death, consists of the gradual return to a condition closely simulating the first stage. Obviously, if the observations of any individual were limited to one or another of these stages, their conclusions would differ widely, so that one who has had only the opportunity of studying such cases within the first three weeks may be inclined to concur in Bastian's law, or one who may have observed only the terminal state may have failed to observe any automatic reflex activity. Certain differences of reaction in incomplete lesions may be pointed out. In complete lesions, the flexor type of movement was observed. In incomplete lesions frequently extensor types of movements were present. In complete lesions, the posture of the lower limbs is one of slight flexion; in partial lesions, extension. Although these ob-

servations have been found to be true in part in one, in part in another case of complete section of the spinal cord, as a general rule partial lesions of the spinal cord generally show a condition comparable with that of a decerebrate animal in which there are defense reflexes with marked spasticity. Although an extensor type of response to plantar stimulation has been observed in complete section of the spinal cord, usually such a stimulation is followed by a plantar flexion of the toes and as a fairly general rule, it may be stated that an extensor type of reflex is strongly indicative of an incomplete lesion. Inasmuch as prolonged states of toxemia or septicemia from urinary sepsis or bed sores have a profound influence in hastening the reappearance of the reflex inactivity in cases of complete section of the spinal cord, it frequently occurs that from the practical standpoint, incomplete lesions are relatively easily recognized by the long persistence of spasticity and the signs of a paraplegia in extension. Of particular value in recognizing incomplete lesions is the early appearance of a Babinski sign, the failure to evoke mass reflexes from above the knee, a definite history of an absence of a state of spinal shock, marked tonicities in the paralyzed extremities, the involvement of both flexors and extensors in reflex movements provoked by the stimulation of receptive fields, and of course in obviously incomplete lesions, the absence of total paralysis or anesthesia below the level of the lesion.

Clinical experience has shown that localization of the level of a lesion, particularly in spinal cord tumors, is frequently inaccurate. Some explanation of the reason for this has been afforded by our experiences. The level of sensory loss is usually not an accurate indication of the level of the lesion. Holmes has shown that the fibers for pain and temperature sense, which we have known for many years, cross to the opposite side of the cord in the segments above the level of the twelfth dorsal, pass to the opposite side completely only after a varying number of segments, differing as to whether or not the cervical and dorsal regions have been traversed. Whereas in the dorsal region one or two segments only are necessary for the crossing, in the cervical segments, four and at times six may be involved in this procedure. It, therefore, follows, that the level of sensory loss may be one or more

actual segments below the level of the lesion in all unilateral lesions of the cord and in some partial lesions of the cord. For this reason the loss of motor function is a very much more accurate indication of the actual level of the lesion.

Of particular importance in this connection is the fact, attention to which had been called by Head, that as the fibers for pain and temperature sense ascend, they occupy a lamellar position. From Holmes' study of unilateral lesions of the spinal cord, where at times he found caudal retreat of the analgesia in recovering lesions, or a preservation of sensibility in the lowermost lumbar and sacral segments in others, it could be concluded that the fibers from the lowermost segments occupy a position lateral to those from the upper. Not only is this true, but as we have observed in cases of intramedullary tumors the fibers for pain, heat and cold each occupy a certain lamellar area so that certain segments are sensitive to pain, more to heat and most to cold. This is particularly true of intramedullary tumors of the upper dorsal region; wherein it can be concluded that the fibers are distributed from within outwards as to pain, heat and cold. Further study of this lamellar distribution of sensory tracts should afford an easy method for the differentiation of intramedullary from extramedullary lesions. One need not emphasize the well recognized observation that preservation of touch and loss of temperature and pain sense is, of course, indicative of a lesion within the gray matter, unless a bilateral lesion in the lateral columns be present.

In injuries of the superior cervical cord, hypothermia has been frequently found to be present. In the inferior cervical cord, hypothermia, slow pulse, a lowered arterial pressure, scanty urine and a general state of stupor has been described. In the first and second dorsal region, a marked and persistent increase in the pulse rate is noted. In the mid-dorsal region, uncontrollable vomiting, while between the fifth and eighth dorsal segments, polyuria has been found.

Unilateral lesions of the spinal cord have been frequently observed in the late war. Usually they have resulted from injury to the cervical segments. They have eventuated in most cases in recovery without surgical interference. In most cases, they have been due to concussion of the cord from through and through wounds of the neck.

This type of injury gives rise to a Brown-Sequard paralysis with loss of motor function on the side of the lesion and loss of sensation to heat and pain on the opposite side.

Inasmuch as the fibers for pain and temperature do not cross below the level of the twelfth dorsal segment, a unilateral lesion of the spinal cord below this point will not produce a Brown-Sequard paralysis. Of great interest in this connection has been the concomitant occurrence of injuries to the brachial plexus. These have consisted of two forms. The first follows a through and through gunshot wound of the neck, wherein the soldier falls with a paralysis in all extremities, motion returning in one arm and leg soon after the injury, leaving a flaccid paralysis of the other arm and a spastic paralysis of the corresponding leg with loss of pain and temperature sense on the opposite side of the body. After a variable time, the paralysis in the leg disappears, leaving a permanent flaccid paralysis in the arm. In the other type, the patient sustains an injury to the brachial plexus and several days or weeks afterwards, develops a slowly progressive paralysis of the leg on the same side with a loss of pain and temperature sense in the opposite side. In such cases it is necessary to determine whether the flaccid paralysis of the arm is due to a brachial plexus lesion, a root lesion or is one of the anterior horns. If the lesion is one of the brachial plexus, the loss to touch will be more extensive than the loss to pain. If it is one of the roots, the loss to pain will be more extensive than the loss to touch. If finally, it is due to a lesion of the gray matter and the sensory loss is the result of the interruption of ingoing fibers, light touch as well as deep touch will be absent and pressure pain as well as prick pain will be absent. If it is due to a brachial plexus lesion, frequently the lowermost segments showing sensory loss may be two or more segments above the level of the sensory loss on the opposite side. Finally if the paralysis in the leg disappears relatively soon and the paralysis of the arm persists, it speaks for a brachial plexus lesion as against a spinal cord lesion.

Lesions of the cauda equina have been frequently observed. They have been characterized by flaccid paralysis, with the reaction of degeneration, atrophy in the affected muscles, asymmetrical involvement of the two sides and frequently spontaneous reflexes. Strangely enough, reten-

tion of urine is very frequently seen for a short period following the injury. The tendency for the severed ends of the funiculi of the cauda equina to curl up, makes the suture of them a very difficult surgical procedure. As is true with tumors of this region, so with injuries, excruciating pain may be experienced.

The indications for operation differ widely as to how soon after injury the patient is observed. What might be a contraindication in a field hospital, would no longer hold true in a base hospital. Inasmuch as spinal shock would be likely to occur during such time as the patient might be observed in a field hospital, the symptoms of this condition simulating as it does complete transverse lesions of the cord, cannot strictly be held a contraindication. Certainly when one is convinced that the lesion is complete, operation is contraindicated from a neurological standpoint. Incomplete lesions afford the greatest opportunity for operative treatment. The spinal cord and its surrounding tissues should not be treated any differently than other parts of the body and evidence of a foreign body with the possible carrying in of infected cloth particles, etc., calls for the same prophylactic surgical intervention as they would in the leg or any other portion of the body. Demonstrations by the x-ray of the inclusion of foreign bodies, or bone splinters within the spinal canal, and fracture-dislocations producing definite angulation call for surgical interference.

Cases which show progressive involvement should not be operated upon until the neurological findings no longer change. Some time after injury lesions in the cervical cord may be expectantly treated for a longer time than lesions in the dorsal or lumbar region. In the field, the mortality from injuries to the spinal cord is very high and probably would be the same whether the cases are operated upon or not. As has been the case with lesions of the peripheral nerves, the neurologists will be found to be more inclined to conservatism and the surgeon more inclined to advocate exploratory operations. Certainly with the exception of lesions in the cervical region, if there are no contraindications because of shock or hemorrhage, an exploratory laminectomy can do no harm, unless one operates through an infected field. In the injuries to the spinal cord due to compression fractures or fracture-

dislocations occurring from causes other than gunshot wound, greater conservatism should be exercised in performing exploratory laminectomies.

25 E. Washington Street.

ADDRESS*

W. H. H. MILLER
SPRINGFIELD, ILL.

Physicians of the Champaign County Medical Society:

I am indeed grateful to be placed on your program.

I am not unmindful of the responsibility which has come to me with the appointment as Director of Registration and Education. The duties which devolve upon me as director of this department are many and varied. A perusal of the Administrative Code as contained in Sections 58 to 65, inclusive, will show more than forty activities which the department is charged with enforcing. A considerable number of these directly pertain to your profession.

It is the Governor's policy and likewise mine to co-operate with the various professional committees in enforcing the laws pertaining to the several professions strictly, honestly and intelligently.

Organizations such as yours may do much in making the administration of these laws serve the people of this state, so that the greatest good may come to them. The object of these laws, as I understand them, is to give to the people of the state every possible protection. Your profession is one directly charged with the responsibility of treating the sick and injured. You have established certain ethics governing the relationship of physicians one to the other and to the people. Your organizations, county, state and national, have done much in the past to obtain standard laws for maintaining medical ethics and for the enforcement of medical practice acts which are designed for the protection of the people. You have constantly worked for higher standards for your profession.

As a member of the legislative body of this state I became acquainted with a number of your profession, especially your legislative committees.

*Delivered before Champaign County Medical Society, May 12, 1921.

These legislative committees have been untiring in their efforts to uphold your ideals.

It is my sworn duty and my pleasure to maintain these standards as outlined in the medical practice acts and the administrative code.

There may be defects in the law governing your profession which interfere with its operation and which the Director of Registration and Education may find it necessary to have corrected through proper legislation.

Recognizing the highly complex duties and relations of the medical profession to the public, it is my fixed purpose and intention, in all cases requiring such remedial legislation, to seek the advice and counsel of the Professional Advisory Committee for Medicine, likewise the duly elected officers of the County and State Medical Societies and representative members of the profession.

Governor Small in his message, under the caption "Public Health", stated:

The upbuilding of healthy citizens, the prolongation of life, is one of the purposes of good government. The physical well-being of the mothers, fathers and children of our commonwealth is worthy of the highest consideration. Sound preventive measures and adequate relief provisions are the essentials for a healthy State.

Sanitation, good housing conditions, wholesome surroundings of employment, healthful recreation, pure water and milk, efficient food inspection, all make for clean, red blood coursing in the veins of our people, sound, vigorous bodies and clean, industrious minds.

I stand for a strict enforcement of the laws of Illinois directed toward the prevention and remedying of physical and mental ills which produce disease and epidemics and underlie insanity and crime.

The recent epidemic of influenza in our country has served to call the attention of our people to the need of greater health supervision. I recommend to the General Assembly that full time medical health officers be provided for each county in the State such as are now provided for in Chicago, Springfield, LaSalle, Bloomington and other cities. I further recommend that every city in Illinois have local health organizations qualified to cope with disease. These health organizations should have under their supervision trained visiting nurses, and doctors and nurses should be provided for the medical inspection of all our schools.

I am reliably informed that at least 20 per cent. of the inmates confined in the insane asylums of this State are there as a result of paresis due to venereal disease. Such contagion should be wiped out of Illinois and the United States, and more rigid provision made for its prevention. Illinois should go further and abolish all places where such diseases have their inception and whence they are spread. This will be

true economy for it is cheaper to prevent than to build and maintain institutions to care for the criminal and the infirm.

The registration of births is vital. We have a standard law. We should enforce it. It is essential to the legal and health interests of our new-born. It prevents much blindness, aids the feeding and mothering of babies, helps future citizenship and facilitates such rights as are involved in the inheritance of property, securing working age certificates, and travelling unmolested in foreign lands.

We are met with a woeful shortage of trained women to care for our sick, not only for times of epidemic, but normally. Illinois should train thousands of women as health militia, preparing them to render first aid in their own homes and enabling them to care for their neighbors in times of sickness, the same as has been so successfully done in Chicago. Such training need in no way interfere with the hospital training schools for professional nurses. I recommend that the General Assembly study ways and means to provide proper care for our sick, especially the 90 per cent., who can neither secure nor afford the services of professionally trained nurses.

In practically all these proposed activities the medical profession is vitally interested. They are matters which should have the careful, constructive thought and attention of your profession.

I am in accord with you in my belief that the physician admitted to examination before our Board must have such qualifications as the law prescribes, and that the tests conducted by the Department of Registration and Education, both theoretical and practical, shall be of such a character as to determine the fitness and ability of the applicant to be licensed to practice medicine in this state.

The law and your ethical standards require that the rights of the sick be paramount. From time to time it will be my duty to sit in judgment with the professional committee upon certain physicians who are in their practice illegal and unethical, and who are, therefore, a distinct menace to the people of the State. These may expect no sympathy or leniency from me. A licentiate and all others who advertise to cure incurable diseases and rob the people of our State will be summarily dealt with.

I earnestly solicit your aid in the difficult tasks ahead of me. This Champaign County Medical Society, which meets under the shadow of the University of this great State, I am sure has a special interest in the great Department of Registration and Education.

It is my purpose to throw every safeguard about the Department, to the end that when my term of office has expired I may deserve the approbation of this scientific body. I thoroughly appreciate your great service to mankind, and will do all in my power to ameliorate any conditions which may be unnecessarily burdensome to you. At the same time, I shall constantly bear in mind that my first duty is to the people of our great State.

I thank you again for your kind invitation to me to appear before you. I am confident in the belief that I shall at all times have your hearty support in the administration of the Department of Registration and Education.

SYPHILIS OF THE STOMACH*

A. A. GOLDSMITH, M. D.,

CHICAGO

The apparent frequency of any disease often keeps pace with the increasing knowledge relative thereto. In my student days we never heard of duodenal ulcer, and at that time had the question been asked, "What is the frequency of this condition," the answer would naturally have been that it was an exceedingly rare disease. Now, this condition is seen every day by all clinicians.

A few days ago a well known pathologist when asked as to whether he had in his museum any specimens of luetic stomach, answered that he had not, and queried as to why we wished to bother with such a rare disease. Yet there is no doubt that this condition is not very uncommon, but that it is very frequently not diagnosed. Perhaps some of these patients who many years ago were told by their physicians that they had carcinoma, with only a few months to live and who today are still alive, are examples of this disease.

Text-books on diseases of the stomach are remarkably brief in dealing with this subject. Andral was the first to describe this condition; in 1839 he wrote up two cases of chronic gastritis cured with mercury. The first case proven histologically (gumma with ulcer) was described by Klebs in 1867.

It occurs in both the hereditary and acquired disease, but in the former is more apt to be latent and to be an accidental autopsy finding. The anatomical observations in acquired lues

with involvement of the stomach, belong exclusively to the tertiary stage. However, secondary syphilis can probably lead to at least functional stomach changes.

Neugebauer examined 200 cases with manifest secondaries and positive Wassermann. He found 62 per cent. hypacidity, 18 per cent, trace of or failure of hydrochloric acid, 17 per cent. hyperacidity. In no case have spirochetes been found.

The earliest case was one year after the primary lesion and the latest 28 years in Eusterman's series. According to one authority, the youngest person with the disease was a 23-year-old male examined at autopsy by Chiari, but Jerome Meyers gives 18 as the youngest. Eusterman reports a series of 23 cases, the youngest being 20. The oldest case is that of a man aged 73 years, reported by Wagner.

Pathological Anatomy. 1. *Gummas:* Single or multiple may be ulcerated.

2. *Ulcers:* one to five cm. in diameter, usually single but may be multiple. (Fraenkel's case had 13 ulcers). Perforating ulcers are not uncommon.

3. *Scars are Rare.* However, peri-gastric adhesions are common.

4. *Specific Chronic Gastritis* is still a debated question.

5. *Linitis Plastica Hypertrophica* (leather bottle stomach). In this condition we have a marked infiltration of the stomach wall, involving in particular the sub-mucosa. The result is an inelastic organ smaller than normal with an open pylorus.

Clinical Picture. The clinical manifestations depend to a great extent upon the pathological condition. In the presence of gumma the picture may be that of carcinoma, whereas in the ulcerative type, it may be that of non-specific peptic ulcer. The disease may be entirely latent and discovered at autopsy. Gigon describes three groups of cases.

1. *Ulcerative form resembling gastric ulcer usually with anacidity:* In this connection Flexner (Amer. Jour. of Med. Sci. 1898 p. 424) reported a 52-year-old male with stomach trouble for three years, the onset having been December 18, 1891, with several days of vomiting and gastric pain and accompanied by a low grade fever. During the following eight months there were periods of pain and vomiting (never bloody), alternating with periods of relief. In August, 1892,

*Read October 28, 1920, before Kalamazoo Academy of Medicine.

there was a tumor extending from the splenic region down to the navel, reaching to a point 9 cm. beneath the left costal arch. This was considered to be a splenic tumor. During the next few months this mass became somewhat smaller and ascites occurred, requiring several tapplings. During 1893 the fluid became less in amount and the patient felt better. On the evening before his death he ate a heavy meal and the next morning a perforation occurred suddenly. The autopsy findings were: perforated syphilitic ulcer; acute peritonitis; large gumma of the liver; old adhesions between the liver, stomach, spleen and pancreas.

2. *Pseudo-Carcinomatous Form*: This form shows a palpable tumor with more or less advanced pyloric stenosis and attacks of intense pain. A case described by Hayem (*Presse Med.*, 18. II., 1905) was that of a 60-year-old male who for one year occasionally had gastric pains



Fig. 1. Syphilis of the Stomach—Before Treatment. Dumb-bell Appearance.

after eating, often with belching. Later there were anorexia and vomiting of food remnants. Extreme emaciation. Gastric contents showed no free acid and also no lactic acid or blood. There were food remnants in the morning. Operation about one year after the onset showed the pylorus markedly stenosed. The gastric wall in this region had macroscopically the appearance of linitis carcinomatosa but microscopically that of lues. The history was then obtained that forty

years previously he had had a mild syphilis. After the operation he was given mercurial treatment and went on to complete healing. He gained 46 pounds in 6 months and was perfectly well four years after the operation.

3. *Luetic gastric ulcer condition similar to chronic gastritis*: This is not spoken of as syphilitic gastritis because, firstly, this condition has not yet been proved anatomically and secondly, the clinical picture of gastritis can be produced by small gummata or luetic ulcers.

Hemmeter in his "Diseases of the Stomach," 1901, describes a case of a negro who had gummata in the sacrum, testicle, liver and spleen. The autopsy findings were those of chronic gastritis. The mucosa and submucosa were beset with numerous masses interpreted by Hemmeter and Flexner as miliary gummata.

According to Pater, chronic luetic gastritis occurs in the hereditary form.

The writer wishes to add a fourth group.

4. *Linitis plastica*. In this form the gastric wall is thickened and inelastic, the pylorus being wide open. In this variety the fluoroscopic findings are particularly characteristic. The opaque meal pours out rapidly as from a bottle. The following case illustrates:

A twenty-six year old male entered Wesley Memorial Hospital, November, 1914. As far back as he could remember he had been subject to attacks of pain in the epigastrium. These would come on suddenly, be very severe, last from ten to fifteen minutes and then disappear quickly. Food had no effect on this discomfort. Sometimes he would have an attack every day for a week and then not again for two or three months. During the two years before admission he was somewhat better. Three weeks before entering hospital he felt a heavy sensation in the epigastrium and was nauseated without vomiting. With every meal he would have a heavy sensation lasting from 15 to 30 minutes. Liquids caused no discomfort. Four days after the onset he began to develop a pain with this feeling of heaviness. A week before entering, he vomited twice both times after eating. Three days later he vomited again, this time dark blood about one teaspoonful and a day or so later, some more blood. The pain became more constant sometimes lasting all night. The gastric contents showed no free acid,

no lactic acid. The x-ray showed a typical "leather-bottle" stomach which emptied completely in about five minutes. Blood Wassermann strongly positive. Complete recovery in a few weeks with syphilitic treatment.

Symptoms common to most forms of the disease:

1. *Pain*, almost always, sometimes continuous, at other times dependent on food intake and again may be nocturnal.

2. *Vomiting* is common but not so frequent as pain.

3. *Hematemesis* occasionally. Only common in ulcerative form. Offers nothing characteristic.

4. *Tumors* and signs of stenosis may occur but offer nothing characteristic.

5. *Gastric secretions* always low or absent. However, in two of the cases reported by Downes and LeWald the hydrochloric acid amounted to 30 and 36 respectively and the total acidity 52 to 70. Lactic acid is said never to be found.

6. *X-ray findings*. According to Downes and LeWald, the findings may be grouped in three classes:

1. *Dumb-bell appearance*. In this variety although the stomach starts to empty rapidly there may still be a six hour residue at the cardiac end.

2. Same as "1" excepting that there is stenosis of the pylorus. In both "1" and "2" the stomach appears to be smaller than normal and there is apt to be compensatory dilation of the esophagus.

3. In this form the infiltration may involve only the pyloric region in which case the findings may resemble closely those found in cicatrized ulcer and may be accompanied by dilatation of the stomach. The writer would like to add another class, that of the

4. *Leather-bottle appearance*, mentioned above.

Course. Although spontaneous cures may occur, cases without treatment usually terminate fatally in from one to three years. It is unlike ulcer in that the treatment applied to this disease has no effect. It is unlike carcinoma in that it does not show a steadily downward course. In Eusterman's series the cases presented themselves 7 months to 7 years after onset of symptoms.

Diagnosis. According to Fournier it is impos-

sible to diagnose gastric lues as it can simulate ulcer, carcinoma or gastritis.

Differential diagnosis brings into consideration retro-peritoneal tumor, liver and splenic tumors.

Hausman lays down the following rules:

1. Normal or increased hydrochloric acid rules out lues.

2. Night pains with anacidity points to gastric syphilis or luetic retro-peritoneal tumor.

3. Characteristic ulcer symptoms with achylia speak for gummatous ulcer.

4. Pyloric tumor with achylia with failure of stenosis findings and with negative Weber on stomach contents and stools speak for retro-peritoneal gummatous tumor encroaching on pylorus.

5. In gastric induration must always think of lues.

6. Demonstrable thickening of the entire



Fig. 2. Syphilis of the Stomach—Same as "1." Four Months After Treatment.

stomach with form and contour retained are very suggestive.

Spirochetes have never been found in the stomach contents. At operation gross appearance alone is not sufficient to allow a diagnosis. A negative anemnesis or a negative Wasserman is not sufficient to rule out the disease.

Treatment. That of syphilis is general. Salvarsan is particularly efficacious.

29 E. Madison Street.

ETIOLOGIC AND THERAPEUTIC CONSIDERATIONS IN ARTHRITIS*

GEORGE PARKER, PH. B., M. D.,
PEORIA, ILLINOIS

The etiology of arthritis during the past fifteen years has been closely associated with focal infections. In fact, of late most forms of arthritis are looked upon as resulting from focal infections. No one as yet has had courage enough to ascribe the Charcot joint, the gouty joint or traumatic arthritis to focal infection. Practically all other forms of arthritis, however, have landed on the etiological pendulum of focal infection.

Focal infections have been assiduously sought and removed. Many cases have been cured. Many others are still making the rounds of physicians' offices, sanatoria, et cetera, seeking relief from one of the most painful and incapacitating diseases affecting the human race. Many of these cases come minus teeth, tonsils, gall-bladders and so on, stating they had been promised relief if they would only permit the removal of such and such a focus.

Do not misunderstand me at this point by thinking that I wish to minimize the importance of focal infection as a cause of arthritis. It is most assuredly the exciting cause in the vast majority of cases.

The following points must be borne in mind, however, in the handling of all cases of arthritis.

1. Let the search for and the removal of focal infection be thorough.

2. Do not promise patients astonishing results, lest a valuable measure fall into disrepute among the laity.

3. Do not let therapeutic measures for relief and cure cease with the removal of the infective focus.

4. Carefully study all cases with the idea of eliciting other disturbing factors and of giving more efficient treatment.

In regard to the first point. I fear that frequently we have been satisfied with the removal of dental and tonsillar foci to the exclusion of a generalized, painstaking search for other foci. It is true that a larger proportion of foci are found in teeth and tonsils, but often the exciting focus is located elsewhere.

Careful inspection, x-ray examination and

dental consultations will suffice to clear up infections in and about the teeth.

The tonsillar problem is not so easy. Infection here is often difficult of detection. It may be located deep in the tonsil and all ordinary diagnostic measures be negative. Helpful points are: history of frequent tonsillitis; arthritis following tonsillitis; expression of exudate from the tonsil; retracting the anterior pillar if necessary to expose properly the tonsil; localized cryptic or anterior pillar redness, and careful search for cervical adenopathy.

Diagnostic aids in the nose and accessory sinuses are: history, transillumination and x-ray.

It is needless to say that a competent nose and throat consultant is needed in excluding head foci.

Auroscopic examination of the ear should be made.

In the chest, search for bronchitis, bronchiectasis, encapsulated pus and endocarditis should be made.

In the gastro-intestinal tract bear in mind ulcer, cholecystitis, appendicitis, diverticulitis, ulcerative colitis and infected hemorrhoids, using the usual methods of detection and making digital and proctoscopic examination of the rectum as a routine.

Of late biliary drainage has added to our diagnostic armamentarium a valuable means of detecting infection in the gall-bladder and bile ducts. I have found this of distinct advantage in two cases of arthritis. In one case streptococcus haemolyticus was cultured from the bile, and in another a mixed colon bacillus and staphylococcus infection was found.

The Genito-urinary system should be ruled out by examination of the urine, prostatic and seminal vesicular expression, careful inspection of the meatus, Skene's ducts and Bartholin's glands, the cervical and vaginal mucosa. History and bimanual examination should exclude tubal infection.

The skin and extremities should be searched for furunculosis, acne, thrombophlebitis of legs and infected toes.

Not until such a thorough examination as outlined above has been made should one advise removal of a mouth infection found on examination.

*Read at 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

If multiple foci are found the case must be adequately explained to the patient and means taken to eradicate all of them.

In regard to the second point, viz. that of promising the patient too definite a result, the following things are to be considered.

1. The acuteness of the case—the earlier the case the more favorable the result.

2. Infection may continue to disseminate from localization of bacteria in and around joints after the original source is removed.

3. If x-ray examination shows marked atrophic and hypertrophic changes involving cartilage and bone, tell the patient frankly, the most that removal of foci will do is to prevent involvement of other joints and the danger of arterial, cardiac and kidney changes.

In regard to the third point, the cessation of therapeutic measures with removal of focal infection, the treatment of the case practically begins at this point, for the patient must receive the benefit of all known therapeutic measures. Rest, foreign proteins, hydrotherapy, fixation and massage have proved useful in the treatment of many cases. Autogenous vaccines were given a thorough trial by Dr. Billings and his co-workers. His conclusion, published in *Oxford Medicine*, is that the therapeutic use of these agencies is not warranted by the results obtained.

The fourth point to be considered in the study of arthritis will cover all future work, both experimental and clinical, for the relief of the arthritic, the study of all cases for disturbing factors, other than focal infections, and more efficient therapeutic aid.

Of late I have given special thought to arthritis involving the knees. This affliction is usually of the hypertrophic type and is more common in women from forty to sixty years of age, who are obese and who are forced to be upon their feet most of the day. Having failed to obtain the desired relief after the removal of focal infections and having been unable to find foci in some cases, I began to search for other factors which would give relief.

Arthritis involving the knee joints brings the patient to the physician early because locomotion is interfered with. One of the early complaints is, that stair climbing produces pain. The fact that these cases are obese means that there is constant irritation to the cartilages of the knee

joint due to the added weight they must support. The blood supply of the knee joint is scant and extra weight brings about almost an ischaemia of the affected parts. The extra amount of fat in these cases causes the centre of gravity to be shifted in front of the normal plane, making it easier for them to walk with the knees slightly flexed, a position which represents joint strain. These factors are productive of hypertrophy of that portion of the cartilage which is on the margin of the trochlear surfaces.

Aside from mechanical factors in these cases the idea occurred to me that the obesity might indicate a disturbance of carbohydrate metabolism. Accordingly, estimations of blood sugar were undertaken and in order to determine further disturbances of metabolism the basal metabolism also was estimated. Obviously if less oxygen is consumed in these cases there must be some effect in the local exchange of gases in the affected joints.

As a result of these observations therapeutic relief was undertaken by the limitation of carbohydrates, principally sugars, and the administration of thyroid extract.

These therapeutic aids produced the following results:

1. The body weight was reduced, thus tending to remove the mechanical factor.
2. The blood sugar was reduced, removing any irritating influence this might have upon the joints and reducing metabolic strain.
3. The metabolic rate was increased, facilitating the local exchange of oxygen in the affected joints.

The results of a treatment along these lines proved to be very beneficial. The early cases showed marked benefit within two weeks. In the more stubborn cases other therapeutic measures were used, such as hot packs, to increase the blood supply, rest and phenyl cinchophanic acid. The fact that phenyl cinchophanic acid relieved some of these cases suggested that uric acid retention might be a factor. Blood studies, however, failed to confirm this supposition.

Blood urea estimations also were made, but no increase was found in this substance.

In all, twenty cases were studied. A few illustrative cases will serve to elucidate further the above points.

E. B., female, aged forty-seven years, weight forty pounds above the average, came complain-

ing of pain, soreness and stiffness of the knee joints. Conditions had existed two months. Careful examination revealed no focus of infection. The basal metabolism was minus 15 per cent. The blood sugar curve showed .12 per cent fasting. One hour after the administration of one hundred grams of glucose it was .24 per cent.; two hours afterward it was .2 per cent.

A distinct crunch was felt upon motion of the joints and x-ray examination showed beginning hypertrophic changes. Patient was put to bed for one week. Strict carbohydrate limitation was enforced, using nothing above 20 per cent. values. Hot packs were given daily, and thyroid extract, one grain, after meals. At the end of this time the patient was permitted to walk about the house, but no stair climbing was allowed. During the day the knees were kept snugly bandaged and hot packs used at bed time. At the end of two weeks the fasting blood sugar was .08 per cent. The basal metabolism was plus 2 per cent. Subjectively the patient felt perfectly well, although joint crepitus was still well marked upon palpation. Thyroid extract was now reduced to one-half grain, morning and evening, and diet slightly increased, although sugars were still excluded. During the next six months the patient reduced her weight thirty pounds, and can now climb stairs and play golf without discomfort.

The next case, M. C., aged fifty-four years, female, weight thirty pounds above the average, was seen as a bed patient, stating that for the past week her knees had been so painful and stiff that she was no longer able to walk. She also complained of slight soreness in the left shoulder. The condition in the knees had existed for several months. Inquiry elicited the fact that she and two other maiden sisters were very fond of sweets, and that home made candy was used almost daily.

The knees were swollen and tender. Marked crepitus was present. Focal infection of the teeth was found and removed. No other foci were discovered. Foreign proteins and hot packs were used with good results. The patient was about the house in ten days. She still complained, however, of soreness and stiffness. At this time her basal metabolism showed a minus 20 per cent.; and the blood sugar curve, fasting .14 per cent.; one hour after the administration of one hundred grams of glucose it was .28 per cent., and two hours afterward it was .21 per cent.

At this time the carbohydrate intake was restricted and thyroid extract given. At the end of one month her basal metabolism was plus 8 per cent, and her blood sugar curve was normal. There were no subjective symptoms referable to the knees but crepitus was still present.

E. F., female, aged forty-eight years, complained of stiffness of knees and pain. She kept a rooming house and it was necessary for her to climb stairs frequently. The condition commenced four weeks ago and the past four days she was practically

incapacitated. Her height was five feet four inches, and her weight one hundred and eighty pounds. Her teeth had been removed several years before and she was wearing both an upper and a lower plate. There was no evidence of tonsillar involvement. Careful examination revealed no focus of infection. The basal metabolism was minus 12 per cent. The blood sugar curve showed a lowered tolerance.

Rest, hot packs, carbohydrate limitation and thyroid extract relieved her to such an extent that she was able to resume her usual household duties within three weeks' time. The basal metabolic rate returned to normal, although the blood sugar curve was still above normal. At the end of two months she had lost fifteen pounds and was subjectively capable of performing her daily routine.

Of the twenty cases studied all were in women between forty and sixty years of age. Their weight varied from plus fifteen to forty pounds. All except two had a lowered sugar tolerance. Fifteen cases showed a minus metabolic rate, varying from minus 8 per cent, to minus 30 per cent, and two cases showed an increase of basal metabolism. Both of these cases showed the presence of a small goiter.

Ten cases showed focal infection at the first examination.

Five cases had foci removed before I saw them, but had not obtained relief.

Five cases presented no foci.

All cases showing a minus metabolic rate and a lowered sugar tolerance were further benefited by limitation of carbohydrates and thyroid extract.

I have made no study of arthritis in general along these lines, but have selected only cases of the type above described.

Pemberton and Foster, however, have made observations from four hundred cases of chronic arthritis and found a lowered sugar tolerance proportional to the severity of the disease. They are of the opinion from their studies, that there is a difficulty in the utilization of food in arthritis and that restriction of diet, together with the use of agents hastening metabolism has a beneficial influence upon these cases.

In support of this view, Pemberton mentions the fact that x-ray radium, thyroid extract, arsenic, muscular exercise, massage and psychic excitement have benefited certain cases of arthritis and that coincident with this benefit there has been a hastening of metabolism.

Whether lowered metabolism renders the sys-

tem more susceptible to the results of focal infection or whether focal infection in itself diminishes metabolic processes, I am not prepared to state. There is accumulating evidence, however, to show that arthritics receive more benefit if decreased food tolerance and metabolic disturbances are taken into consideration, along with the removal of focal infection. It is to be hoped that further research and clinical study will disclose other factors which will be of benefit in arthritis. Focal infection leads the way, but undoubtedly much more work is yet to be done before the problem is settled.

I am satisfied from my own observations that certain cases of arthritis involving the knees, to the exclusion of other joints, and occurring in the obese woman of forty to sixty years of age are greatly benefited by limiting the carbohydrate intake and by using measures to increase metabolism.

THE NECESSITY FOR ANTENATAL CARE IN OBSTETRICS*

BASED ON CASES OBSERVED IN COOK COUNTY
HOSPITAL

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Antenatal care of the pregnant woman, designed for her good and for the good of the coming baby, has been in the minds of men since the dawn of history. The subject has nearly always been treated in a mystical rather than in a scientific manner, even to the present day. The incantations and "Medicine" antics of the primitive savage, the votive offerings of the ancients, the superstitions of the medievalists, the babbling of old wives and midwives of the present day, show the deep popular interest in the subject but advance the knowledge thereof not a whit. Indeed, little of real scientific value in antenatal care has been accomplished until the present century.

Ballantyne of Edinburgh was among the first to do any genuine scientific work in the line of antenatal pathology and is easily foremost of all in the value of his work. In his treatise on Antenatal Pathology, published in 1902, he not only pointed the way in which future research must run, but laid a few miles of track into the wilderness. In an article in *International Clinics*,

1912, Vol. 1, "Danger Signals in Pregnancy," he has shown us something of what has already been accomplished in Edinburgh and has well surveyed the route of future progress.

Anyone who has worked many years in a large obstetrical clinic must have seen the results of neglect of pregnant and parturient women before they sought refuge and help in the hospital. This neglect has been due to ignorance; ignorance of the women themselves, ignorance of their relatives and neighbors, ignorance of the midwives who have attended them; and, alas, sometimes of the doctors who have attended them; and, lastly, ignorance of the general public. Everybody knows that child-bearing is a necessary and usually a normal function of woman, but everybody has failed to realize that the process is sometimes, in the artificiality of our civilization, an abnormal and even dangerous process. The profession in general has not realized how much we must know about the whole of the process, even from conception, or before.

The difficult cases come to the large clinics when it is too late to do the proper thing, that thing which should have been done weeks or months before term. Take one striking example—a case of eclampsia. The woman enters the ward in convulsions, she has had several attacks before she arrived; she is comatose between attacks; the best thing possible for the case at this time is done under the best of conditions, it may be cesarean section, alkalization, use of sedatives, blood-letting, transfusion or whatever may be indicated. The patient goes on with the convulsions, goes into coma and dies, in spite of the best efforts to save her.

Some cases of severe eclamptic toxemia are like lightning out of a clear sky, but the vast majority of them arise slowly, come gradually to the danger point, and by proper treatment in the early stages could have been easily cured. If, however, no proper care has been given the pregnant woman during her pregnancy, if the urine has not been examined, the heart, pulse and blood pressure not studied, the dangerous symptoms such as edema, persistent or recurrent nausea, insomnia, headaches and failing vision not noted, then all concerned will be astounded when the calamity falls. Usually these danger signals have not been observed because no opportunity has been given to medical science to observe them.

The patient and her friends, believing that

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having a baby involves only the discomfort of carrying it and the pains of delivering it, and that the only use for doctors is to hasten the labor itself and to take care of any and all complications at that time, neglect to seek expert advice in time of calm, but expect the medical pilot to bring the craft to harbor by some sort of magic. If he does not succeed, too often they will pile all of the blame for the results of their own neglect upon him.

They are not to be blamed for this unless they have had the chance to learn better from proper instruction. Many, lacking good understanding and handicapped by their superstitions and half-knowledge, would not believe the truth if they had it pounded in with a mallet. Unfortunately, many of the profession do little to overcome this crass ignorance, indeed, often add to it by injudicious advice. Some of them must be educated to use their knowledge of obstetrics, to retake much of it which they have forgotten and to gain some more by judicious reading.

In no other branch of medicine is the general practitioner so confident of his ability to work miracles, or so willing to "trust to luck." Perhaps he thinks that babies were born before doctors were invented, that most labors are spontaneous and that severe dystocia is relatively rare. Perhaps he thinks that he can send for expert counsel when the case turns out badly or can rush the woman to the County Hospital and dump all the responsibility upon its obstetrical staff. Some seem to think so.

Such doctors are relatively few, however. Far outnumbering them are the midwives and far more powerful are they in their capacities for harm. Untrained in obstetrics, in asepsis, in the elements of nursing, in personal cleanliness, as most of them are, they dare to assume the care and remain for a long time in care of cases which would challenge the abilities of a Simpson, of a Richardson, or of a Jaggard. After delaying the case for hours and days, making numerous unclean internal examinations and multitudinous manipulations, they call a doctor or send to the hospital.

When the medical profession realizes that prophylaxis is the keynote of modern obstetrics, when the midwife ceases from troubling, when the general public begins to learn that a baby case begins at least at the time of conception and should be under competent care from that time,

when visiting nursing and social service are able to carry the truth to the prospective mothers of our land, and when the multiplicity of maternity hospitals and homes has provided for all who need them; then will the obstetric millennium have come; then will the interesting and difficult cases which now enliven our clinics be so rare as to call forth an amphitheater full of observers; and then will pin feathers begin to sprout over our shoulder blades.

Nowhere is the need for antenatal care of mother and fetus more forcibly impressed upon the understanding than in the ward for surgical obstetrics (Ward 50) of the Cook County Hospital. We get the neglected cases. To the honor of the profession be it said, most of these cases by far have never come under the care of any Doctor of Medicine. They are neglected cases just the same, although in most of them even the patient cannot be blamed. While knowledge cannot blame ignorance, fate inflicts the penalty nevertheless.

As my small bit of the propaganda for antenatal care, I have selected some cases which have occurred in the County Hospital lately, which illustrate, to my thinking, the imperative need for more of it in Chicago. Most of them came to us late, so that what was done for them was forced upon us by circumstances due to the lateness. Some of them, however, notably many of the cases of toxemia and of pyelitis, came to us in time to employ antenatal care ourselves. The results of the former class of cases were not brilliant; of the latter class, more satisfactory.

If I were to cite every case which proves my point, I would need to read to you the histories of all cases in Ward 50 for ten years back. Instead I reviewed the records of certain classes of cases within the past year which seemed to me illustrative of my argument. At that I confined my search to cases of syphilis, hyperemesis, toxemia eclampsia, placenta previa, placenta ablata, pyelitis, prematurity, severe dystocia and ruptured uterus. In this paper I must limit myself to syphilis, toxemia, hyperemesis, eclampsia and placenta previa, citing indeed only a few of the more instructive cases of each group. "Art is long and time is fleeting."

Syphilis. Syphilis may have been a factor in more cases than we knew. A routine Wassermann test has not been taken on all of our obstetric patients, although we are getting to employ

this reaction in more and more instances. For the past six months we have taken Wassermanns of the fetal blood (from the cord) as a routine practice. We know, of course, the limitations of the test, especially how often it is masked in pregnant and puerperal women. We have not had facilities for making scientific examinations of the placenta in all cases. Our diagnosis of syphilis is often based on clinical manifestations and history.

Case No. 2: V. S., ii-gravida, ended her first pregnancy with a still-birth at the eighth month. She was delivered of the second child at term in our ward for normal obstetrics. The umbilical blood gave a positive Wassermann. All such cases pass to the social service department, and are followed up to a limited extent. This case was advised about treatment for her syphilis. The child was puny; under six pounds weight, but living on discharge.

Case No. 3: M. N., entered in her first labor with full dilation of cervix and head on perineum. Condylomata around the vulva and especially thick at the fourchette, seemed to require an episiotomy with removal of the warts. The patient gave a history of a syphiloderm two years before. The child was eight months, small and puny, but was resuscitated and was discharged with the mother. During the puerperium, while in the hospital, she was given neosalvarsan with mercurial inunctions.

Previous antisyphilitic treatment before and during the pregnancy would have been beneficial in both cases.

Next follows a series of cases of premature labor with proved or probable syphilis.

Case No. 32: Baby Alexander (colored), small, weak, cyanotic and eight weeks premature; died in half an hour. The mother had sharp hemorrhage from a placenta ablata but was delivered shortly after with little hemorrhage. The history showed that the mother had been treated some time previously with salvarsan.

Case No. 40: G. P. (colored), ii-gravida, first child born dead at term. This pregnancy at thirty weeks, ended in a spontaneous, rather long dry labor, with delivery of an asphyxiated premature child, which was revived and left the hospital with mother two weeks later against advice. Diagnosis of probable syphilis, based on history of former stillbirth and prematurity. Wassermann from fetal blood negative.

These cases had no care during pregnancy and yet it seems probable that repeated examinations would have led to the suspicion of syphilis. Even with negative Wassermann it would be advisable, with other good grounds for suspicion, to have given intensive antisyphilitic treatment, which might have saved the children from prematurity and perhaps set the mothers on the road to cure.

Hyperemesis Gravidarum. Case No. 4: I. A.,

ii-gravida, enters complaining of excessive vomiting, pains in the hypogastrium, weakness, headaches, slight rigors and constipation, in the 25th week of pregnancy. Her last menses were July 15, 1920; she began to vomit September 15; came to this hospital eight days later, remained seventeen days and was discharged in good condition. She enters this time January 1, 1921, having started vomiting again two weeks ago. While at home she kept on restricted diet as advised and did not vomit again until she resumed a heavy diet two weeks ago. She had no trouble with her first pregnancy.

On examination she appears acutely ill; cannot walk; pulse is weak and fast; she has pains in the abdomen evidently due to retching; she has a simple pharyngitis and pyorrhea with carious teeth. The eyegrounds were negative and the blood pressure normal. She was at first treated by a diet of toast and water, under which she improved. Sodium bicarbonate and calcium carbonate were given. Urine was negative under repeated examinations, the blood chemistry showed no excess of the nitrogens, sugar¹ 156. Wassermann was negative. The diet was carefully increased and she was discharged recovered on the nineteenth day.

Case No. 7: M. H., 35 years (colored), iv-gravida, enters complaining of persistent vomiting, nausea, headaches, weakness and constipation. She is pregnant about ten weeks. She began to vomit about five weeks ago, after taking senna leaves. The nausea and vomiting have become more severe with time and now she is nauseated all her waking hours and vomits after each meal. The vomitus is sour; weakness and headaches have been present since the onset. Examination shows: Temperature 100.6. teeth carious, low blood pressure, anteverted pregnant uterus, size of an orange. Renal efficiency test shows 55 per cent. phenolphthalein excreted in two hours. Blood chemistry was negative. Treatment was rest in bed, colonic flushings, Wolfer's* solution with sodium bromide, and chloral per rectum every four hours; one intravenous injection of 350 cc. normal saline with glucose and sodium bicarbonate. The patient gradually improved and was discharged recovered in sixteen days.

Case No. 13: J. G., 33 years, iii-gravida, entered the surgical obstetric ward with a provisional diagnosis of toxemia of pregnancy, complaining of vomiting, hematemeses, and hemoptysis, with abdominal pain. Examination later of the nasal passages showed that the supposed hematemeses and hemoptysis were due to a bleeding ulcer on the septum. Vomiting has been present since conception, regardless of eating and increasing in severity and frequency. She has had two children, both living and well, no miscarriages.

Examination shows a well nourished woman not acutely ill; the cervix soft and patulous, compressibility of the isthmus, retroflexion of the uterus with fundus to left and cervix towards the right; the uterus as large as that of a three months' preg-

*5% each of glucose, alcohol and sodium bicarbonate.

nancy. The urine was negative. Temperature on entrance was 101, blood pressure normal. Treatment was rest in bed, light diet and cerium oxalate. The patient had apparently recovered completely on her discharge nine days later.

In this series of eight cases of hyperemesis of pregnancy, we may claim to have done a bit of antenatal care ourselves. Most of these women appeared seriously ill on entrance, but all of them, except one who left on the day of admission because we refused to abort her, responded well to conservative treatment. One visited the hospital twice in the same pregnancy. She evidently suffered from a toxemia and acidosis, which responded to restricted diet.

The treatment of these cases was simple, consisting essentially of rest in bed, elimination, and alkalization. "And the greatest of these is *rest in bed*." Let us compare them with the next series of cases, all of which reached us late in pregnancy, many of them with a history of toxic symptoms in former pregnancies, but many with no such history or no reliable history of any kind. With these we did not always have such good results.

Toxemia of Pregnancy, Eclampsia, etc. Case No. 20: T. J., aged 37 years, vi-gravida, entered complaining of headache; spots before the eyes, edema of feet, arms and hands; pain in back, right side and epigastrium; swelling of abdomen; nausea and vomiting. She is apparently pregnant at term, and has not felt well during the whole of this pregnancy. Abdominal pain, nausea and vomiting have existed nearly all through.

She had four normal pregnancies and labors. The fifth was complicated by convulsions and coma at term for which cesarean section was performed in this hospital two years ago. The operation and convalescence were uncomplicated but a small hernial protrusion has since appeared at the upper angle of the cicatrix. With this exception she was in good health until the beginning of this present pregnancy.

Examination shows a corpulent woman, not acutely ill but complaining of headache and exhibiting swelling of feet and hands, with puffy and florid face. The blood pressure was: systolic 144, diastolic 100. Urine on the day of entrance was negative. The head was floating; the external pelvic measurements were normal or above.

The membranes ruptured spontaneously and without pains five days after entrance. Cesarean section was performed, the indications for which were: pre-eclamptic toxemia, history of previous cesarian operation, full term, floating head and ruptured membranes. The diagnosis of toxemia was confirmed by further examination of the urine, which showed on the day after entrance; dark amber color, increased acidity, albumin, many red blood cells, few leucocytes, a few

granular and hyaline casts. The patient made an uneventful recovery and was discharged in four weeks. This woman probably was saved from a second attack of recurrent eclampsia by the prompt evacuation of the uterus. Who can say that she could not have been carried along through both pregnancies under proper antenatal care, so that she could have gone on to normal deliveries?

Case No. 25: K. W., aged 27 years, i-gravida, pregnant about thirty-two weeks, enters complaining of headache, swelling of feet and face, backache, nocturia and dyspnea. Edema of feet and urinary trouble had existed for one month, headache for a week. Examination revealed a very fat woman, weighing three hundred pounds. The abdomen was large and protuberant, the uterus rising seven finger-breadths above the umbilicus. The head was fitting in the inlet. Blood pressure was: systolic 153, diastolic 100. Urine: 1028, albumin abundant, granular casts. She was treated by magnesium sulphate, potassium citrate and tincture digitalis; electric sweats every few days. She continued in good condition but with the urine still albuminous and some headache until the thirty-eighth week, when she went into labor, after an increase of headache and vomiting of undigested food. A female child was delivered spontaneously, weighing four pounds. She was discharged recovered on the eighteenth day after the delivery.

This case had about five weeks of prenatal care in the hospital after her severe symptoms had driven her in. She was a corpulent primipara of 27 years, suffering from a rather severe toxemia, yet she went through the pregnancy without eclampsia and completely recovered. What a good case this would have been for antenatal care, with proper diet and regimen in a hospital if necessary, throughout the pregnancy. In all probability urinary signs would have been discovered early.

Next follows a series of cases of postpartum eclampsia. It is well known that the prognosis of eclampsia is worse the earlier the toxic symptoms appear, *ceteris paribus*. As a rule the later in the puerperium the convulsions appear the better the prognosis. Of the five mothers in this series of post-partum eclamptics, one died.

In the fatal case (No. 18) severe convulsions with coma came on about 1½ hours after delivery, during the next twelve hours the patient had seven convulsions before she came to the hospital, where she arrived in a very serious condition. Serious signs of toxemia appeared as early as the seventh month. She had no care at all until the labor, which was attended by a midwife. Death occurred at 1:30 p. m. on the day of entrance.

The autopsy by Dr. LeCount showed fatty changes in the liver, general anemia, hyperemia and edema of brain substance, passive hyperemia and edema of lungs, hyperlastic aorta and obesity.

Case No. 22: M. T., single, 19 years, i-gravida, entered the normal ward in the second stage of labor and was spontaneously delivered of a large healthy baby. Less than two hours after she was seen to be frothing at the mouth, breathing rapidly and stertorously. The pulse was of fair volume and regular, temperature 100. Two hours later she had severe headache, followed in less than an hour by a convulsion lasting three minutes. Blood pressure: systolic 150, diastolic 90, rose a little higher on the third day. She was given one dose of morphin and received sodium and potassium citrate every four hours per rectum.

A catheterized specimen of urine showed much albumin. A diagnosis was made of post-partum eclampsia with suspicion of chronic nephritis. She rapidly improved and was discharged on the eleventh day recovered.

In this case it is likely that repeated examinations during the pregnancy would have given warning and have led to treatment which would have saved her from the danger of eclampsia and the probable damage which must have come to her kidneys.

Next comes a series of seven cases of antepartum eclampsia with three deaths, all of the cases very severe.

Case No. 15: E. K., aged 19 years, i-gravida, came to the hospital in a condition of semistupor varied by convulsions and apparently pregnant at term. Her mother stated that the patient had swelling in hands, arms, legs, feet and face for about three weeks. There had been frequent urinations for two weeks, headaches for same which were severe for last week. Last night, however, she was dancing and feeling well. At 4 a. m. she awoke and started having convulsions every twenty minutes, up to the time of her entrance at 6:40 a. m.

Examination showed an obese young woman of waxy complexion, acutely ill with convulsions, showing slight cyanosis and anasarca. The heart was slightly enlarged to the left and the tones were sharp, with hemic murmurs. No fetal heart tones were heard, the head was high and the membrane intact. A conical non-elastic bag was inserted into the cervix and lower segment. Gastric lavage evacuated 200 cc. dirty material with bile and dark blood. The stomach was washed out with a 5 per cent. solution of sodium bicarbonate, 500 cc. being left in with three ounces magnesium sulphate. The colon was flushed and eight ounces Wolfer's solution every four hours was ordered per rectum. Twenty ounces blood was removed by venipuncture in the morning and thirteen ounces in the evening. Five hundred cc. normal saline solution with one ounce sodium bicarbonate was given intravenously and nitroglycerine subcutaneously. Catheterization showed almost complete anuria for several hours. After the bag was expelled and the cervix thus dilated, a full term dead fetus was delivered by a rather difficult forceps operation with

episiotomy. The urine showed much albumin but no casts; remained acid in spite of the alkaline treatment. Wassermann reaction was negative. The patient gradually improved and was discharged on the nineteenth day recovered.

Case No. 16: M. H., aged 38 years, American Indian, vi-gravida, comes to hospital in stupor with a history of a few convulsions. She has suffered from rather severe headache for about a week, numbness throughout the left side and dimness of vision for a day. She can be roused from her stupor but answers questions with difficulty. One child is now living and well, aged nineteen; three children died at early ages of unknown causes; one abortion. She had a rather severe attack of influenza two years ago, during which one of the babies was delivered by operative interference.

Examination shows an obese Indian woman; the mouth, lips and tongue bitten and bloody; the dilated pupils rolled outwards and upwards; the heart beats irregular, fast and forcible. The uterus extends almost to the navel. At first urine could not be collected on account of involuntaries and colonic flushings; later the catheter drew no urine from the bladder. No fetal heart tones were heard. Eighteen ounces blood were drawn by venipuncture. Spinal puncture withdrew twenty cc. clear fluid under pressure. The stomach was washed out with 5 per cent. sodium bicarbonate solution of which one pint was retained; Wolfer's solution was retained in the rectum; one ounce magnesium sulphate was given by mouth; morphin and chloral were pushed. Only two convulsions had occurred as far as known and the coma was, for the first few hours, not deep. Towards morning of the night of entrance stupor increased. A bag was inserted into the cervix. The eye examination was difficult because of chemosis of the conjunctiva and morphin contraction of the pupils. The patient died fifteen hours after entrance. There was a coroner's autopsy, report of which has not been found with the records.

This case resembles one of chronic nephritis or recurrent pregnancy nephritis. Antenatal care even during the last pregnancy, would have stood a good chance of saving both mother and fetus.

The death rate of our cases of eclampsia, both antepartum and postpartum, appears high. It must be remembered, however, that none of these women had any care worthy of mention during pregnancy, while most of them, especially the antepartum cases, had suffered from active symptoms of toxemia, often indeed with convulsions, for hours or even days before they were finally sent to the County Hospital. A few of the cases had medical attention for a short time, the rest were in care of midwives or else without any care before entering. One thing is true about puerperal eclampsia and other manifestations of tox-

mia, and that is that the earlier treatment is begun the better is the prognosis. Proper antenatal care would surely have benefited all of these patients and just as surely would have saved the lives of mother and fetus in a large proportion of them.

In the foregoing series of twenty-two cases of hyperemesis, toxemia and eclampsia, it is interesting to note the condition of nutrition. With one exception all were well nourished. Six are recorded as obese, one weighing 300 pounds. Many authors lately have mentioned the frequent connection of obesity or plumpness with the toxemias of pregnant women, including in that category cases of placenta ablata, where a toxic element seems to be frequent.

Placenta Previa. Perhaps the importance of antenatal care in cases of placenta previa is less than in many other of the serious complications of pregnancy. Probably this is true because antenatal care is so much in its infancy that we have not discovered such methods of early diagnosis as we have in other conditions. I have reviewed the recent histories of sixteen cases of placenta previa and find that seven had hemorrhages several days before entrance. A brief resume of some of the latter cases follows:

Case No. 48: K. P., aged 38 years, vii-gravida, pregnant about 36 weeks, came in complaining of slight vaginal hemorrhages which had occurred intermittently for three months, and pains in the lower abdomen. A midwife had examined her without gloves two months ago and a doctor had examined her shortly before admission.

Examination showed the uterus reaching to within three finger-breadths of the xiphoid; O. D. A. position, not engaged; cervix large, soft, dilated to size of a quarter, placental tissue felt centrally. The temperature was 100.4, she had been recently examined vaginally before entrance; this was her eighth pregnancy and the fetal heart tones had not been heard at the hospital, therefore a bag was inserted (No. 6). In a short time the os dilated and the bag of the dead fetus was expelled. Bleeding continued so that it was necessary to remove the placenta manually at once. She was given saline hypodermoclysis. She ran a moderate temperature for a week and then normal. She was discharged on the fourteenth day on request and against advice, improved.

In this case there surely was plenty of warning of the impending calamity for months beforehand, but no competent person was on hand to advise antenatal care of any value.

Case No. 49: A. S., aged 36 years, ix-gravida, came in with vaginal bleeding, which had been going

on for six weeks without any pain whatever. She was up and about all the time and felt life until the day before entrance, but none since. She was pregnant at term. Examination showed a slightly anemic woman bleeding per vaginam; no fetal heart tones, abdominal tenderness; cervix effaced and dilated to size of a dollar; placental tissue felt over the presenting part. The diagnosis was placenta previa centralis, with dead fetus.

Under ether, version with extraction was performed; the uterus packed with wide gauze strips. The convalescence was uneventful and she was discharged on the tenth day recovered.

Here was a woman going about without warning in imminent peril of her life for six weeks. She had sought no advice because she had never been instructed and probably thought that, considering she had safely gone through eight pregnancies and deliveries already, she was immune from danger.

Case No. 53: A. M., aged 29 years, ii-gravida, had noticed a painless hemorrhage per vaginam, intermittent but gradually increasing, for two weeks. She finally called a doctor who sent her to the hospital, without vaginal examination. On examination she showed acute anemia and pregnancy near term. The diagnosis was placenta previa centralis. Cesarean section was done the same day and, barring a slight infection of the abdominal wound, she had an uneventful recovery.

The results of these neglected cases of placenta previa were all so good (all sixteen recovered) that it might seem that lack of antenatal care resulted in no evil in these cases. The results compare very favorably with those of toxemia and eclampsia which we have treated in the County Hospital. Placenta previa, however, is a much more simple thing than toxemia. Unavoidable hemorrhage is the only early dangerous symptom. In placenta previa the amount of hemorrhage and the extent of demonstrable anemia indicate the damage already done and the probability of more.

In toxemic cases it is extremely difficult to determine how far the damage to vital organs, heart, kidneys, liver, brain and nervous system has gone. The extent of the convulsions and the coma, the abnormality of the chemistry of blood and urine, and other physical aspects of the case are much less indicative than are the usual signs present in placenta previa. The treatment in placenta previa is also more simple and more standardized.

Ritter defines prenatal care as preventive medicine applied to obstetrics. Obstetrics implies more than care of the woman from the onset of labor to the delivery of the placenta. Complete

knowledge of the physical, mental and home conditions of the pregnant woman, obtained by careful and complete examination as early as possible after conception; combined with frequent observations during the course of gestation, and supplemented by the opportunity of giving her proper treatment as soon as anything abnormal or threatening is discovered, are the three essentials of prenatal care.

These essentials require education of the public as to the necessity of proper observation and care during pregnancy; ability of the medical adviser to recognize abnormalities and danger signals and to treat them when he finds them; and the physical means of applying this treatment.

Education of the public must be, as in other hygienic propaganda, by lectures or familiar talks at convenient meeting places, such as community centers and the like; by personal advice and persuasion at the homes of the poor and ignorant from social workers, visiting nurses, etc.; by pamphlets and posters in clear and understandable style; by the daily press and magazines; and by the personal advice of medical men, during their office hours, at their house to house visits, or in dispensaries.

Ability of the medical adviser to recognize and treat abnormalities among pregnant women is only obtained by good school training in obstetrics and allied branches of medicine, frequent study of books and journals, discussions in societies, and attendance at obstetric clinics.

In addition there must be opportunity for research and study of prenatal pathology and physiology. This implies more and better maternity dispensaries, hospitals and maternity homes, well equipped for care, study and research.

• Prenatal clinics have made beginnings in Edinburgh, London, New York, Baltimore, Boston, Louisville, and to a small extent in Chicago. The Cook County Hospital, the largest in the city and among the largest in the world, and running a maternity clinic of 1,300 to 1,500 cases a year, has none.

It is as much the duty of the County to provide proper care for indigent expectant mothers and unborn children as it is to provide maternity wards for their benefit during labor and the puerperium. From the standpoint of public economy and public health, prophylaxis is better than

cure. Since delayed and neglected cases are sent in such large numbers to the County and other charity and semi-charity hospitals in this community, it follows that the numbers of such patients would be greatly reduced if they had been subjected to antenatal care, supervision and advice, and thereby had been prevented from becoming neglected cases.

Timely care of pregnant women would pay the public big dividends even in money, but especially big dividends in the lives of useful women saved to their families, in the healthy infants brought into the world without handicap, and in living children where they now are sacrificed to neglect.

If we are going to have children born it behooves us, as guardians of the future of the country, to have them as well born as possible. While neglect of antenatal care affects nearly all mothers and infants, rich, well-to-do, hard struggling, and very poor, it affects the latter two classes most because these are by far the most numerous. The women of these classes also have the most babies. Therefore we need to look to the welfare of the mothers of the poor, for these are the mothers of the next generation.

DISCUSSION

(Abstract)

DR. H. B. HEMENWAY, Springfield: Dr. Lewis has put his whole stress upon the care of the mother, but I wish to call attention to the other side of the proposition, the children. A very large proportion of the deaths of children, under three months particularly, are among the children prematurely born. It has been the policy of the State Department for some time to question practically all deaths of children under three months occurring outside the city of Chicago, to find out whether these children were prematurely born. They are reported as having died from broncho-pneumonia, bronchitis, marasmus or malnutrition or something of that kind, but almost all of these are found to be prematurely born.

DR. EDMUND W. WEIS, LaSalle: Would emphasize what Dr. Lewis has said, that is, that we should do more prenatal work. The doctor of today must insist that all pregnant women should be looked after from the time they discover that they are pregnant. In LaSalle we are doing that, or trying to. We have a Baby Welfare Station and recently we have added a Prenatal Auxiliary. We do not do much but we hope that it will grow.

DR. C. W. EAST, Springfield: The point I urge may call forth criticism unless the motive of it is clearly conceived. It is gratifying to have a man of Dr. Lewis' standing point out needs and deficiencies in the care of pregnant women, with their

remedies. I emphasize one possible remedy. The occasionally heard cry about doctors' practices dwindling would no longer be heard if doctors were really doing the work that is to be done. He deserves to go without the practice unless he broadens out into something besides meeting acute emergencies. He is not improving his opportunities of prophylaxis. The fields of practice are open to any man who has business instinct and medical training enough to go and get what is coming. Then he would not be so afraid of sociologic standards, but would find them strictly allied with his interests.

DR. W. E. SCHOWENGERDT, Champaign: It is all right to follow out this prenatal care if you get the cases in time, but unfortunately a doctor is oftentimes not called until the labor is at hand; at least, that has been my experience and for that reason I refuse to take cases that I do not see until the time of delivery. Every one of us can tell experiences in obstetrics that are harmful to the practitioner, cases where he has not gotten his patient early enough. The point is this, we must educate the women to call on the doctor when they first become pregnant, educate these women to consult the doctors and get this prenatal care.

DR. H. F. LEWIS, Chicago (closing): I am very much gratified by this valuable discussion because it shows your interest in the matter. It is like this—there are at least seventy-five here who can do a lot of good if they will go and talk about this subject.

Dr. Hemenway's remarks are decidedly *apropos*. I could not take in the whole subject, but may be Dr. Hemenway could elaborate on this in the ILLINOIS MEDICAL JOURNAL. That question is decidedly the thing. Prematurity is responsible for many dead babies. There are a lot more premature babies than we think. I spoke mostly from the standpoint of the women because I do not nowadays know much about children after they are a couple of weeks old.

Dr. Weis has given us a boost from LaSalle. It is also important that we do things in Chicago; some institutions could make a beginning, but the big one, Cook County Hospital, is not doing a thing upon prenatal care, in fact, they turn women away unless they are near labor; they have to because there is no room for them. We can do very little prenatal care in the Cook County Hospital except in some of the toxemic cases.

Dr. East also gave us a few things to think about. I am glad he spoke on this subject. His remarks are very well worth thinking about. We doctors ourselves do not do our share to educate the people. We are all educated ourselves, so we ought to do more in the way of showing up these things, and the way to do it is in every way whereby the public can be reached. I may mention the public press, *Saturday Evening Post*, magazines and all that sort of thing; they do lots of good in the world. Think of the chances we have to speak of these things when we meet people, casually, socially, at the office, or whenever "two or three are gathered together."

THE INCIDENCE OF A HISTORY OF TONSILLECTOMY IN TWO SERIES OF CASES OF SCARLET FEVER. IS TONSILLECTOMY A PAR- TIAL PROPHYLAXIS?

LEWIS T. GREGORY, M. D.

URBANA, ILLINOIS

In tabulating some data in a series of 62 cases of scarlet fever in the Contagious Department of the Evanston Hospital, Evanston, Illinois, during the fall, winter and spring of 1919-1920, the writer was surprised to discover the following: of the 62 cases, only 4 gave a history of having tonsillectomy performed previous to the onset of the scarlet fever. Of these cases, 3 showed clinical evidence that tonsillectomy had not been complete.

In a second series of 25 cases of scarlet fever, occurring among students of the University of Illinois during the fall and winter of 1920-1921, the records at the Contagious Hospital show the following: 20 cases with a history of no tonsillectomy, 2 cases with a history of tonsillectomy, and 3 cases showing no record. There were no record of an examination of the throats of the two cases with tonsillectomy, as to whether the tonsillectomy had been complete or not.

A "sore throat" (tonsillitis) is generally the first symptomatic manifestation of the onset of scarlet fever, and clinically the tonsils are always acutely inflamed. Furthermore it is generally accepted that the tonsils are the points of entrance of the infection. And if this is so, is it not possible that tonsillectomy may be at least a partial prophylaxis against scarlet fever?

The writer is not advising the promiscuous removal of tonsils and adenoids. However, when hypertrophied and infected tonsils and adenoids are removed in young children, as is done so frequently these days, can we feel that we have decreased the susceptibility of these children to scarlet fever?

Two other observations may be of interest: first, of the nurses caring for scarlet fever patients at the Evanston Hospital during the above mentioned period, only three contracted the disease. None of these had previously had tonsillectomy performed. Second, one case, a boy of 12 years, with no temperature after the ninth day of the disease and no complications, was

discharged as "cured" at the end of five weeks of quarantine. The physical examination on discharge showed desquamation complete, no nasal nor aural discharge, throat not inflamed, but hypertrophied tonsils. Examination otherwise negative. Six days later, his two sisters, aged 16 and 4 years respectively, were admitted to the Hospital with scarlet fever, both developing the initial symptoms within two hours of one another.

The writer has never seen a similar observation and theory recorded in the literature, but desires no credit for priority, if the observation has been made and recorded by others previous to date.

CHRONIC NEPHRITIS*

W. A. WISEMAN, M.D.

CAMARGO, ILL.

The approach of this form of kidney disease is insidious. There is some decline in strength, the body is more easily fatigued, the mind is rather sluggish, and the appetite is poor. Commencing insidiously, it is not until dropsical symptoms are manifest that the nature of the case is declared. (Bartholow, 1883.)

An acute attack of Bright's disease may become prolonged, and gradually pass into a confirmed malady, or the complaint may come on insidiously and develop itself very slowly. In either case we have a dangerous chronic affection established. (DaCosta, 1884.)

Chronic Bright's disease or chronic nephritis is an incurable infection, and the anatomical conditions on which it depends are quite as much beyond the reach of medicine as wrinkled skin or gray hair. (Osler, 1892.)

The most common form of Bright's disease is chronic parenchymatous nephritis. The mode of development and the symptoms presented by these kidneys enable the clinician to foretell accurately what kind of kidneys will be found at the autopsy. (Loomis and Thompson, 1897.)

This form of Bright's disease corresponds somewhat to the hypertrophic cirrhosis of the liver. Medication will not arrest kidney degeneration. (Calle, 1906.)

A chronic diffuse inflammation of the kidneys characterized by epithelial, glomerular and connective tissue changes with exudation from the

blood vessels. The prognosis is always unfavorable but life in comparative comfort may be continued for a number of years, the symptoms disappearing and the albumin clearing to a considerable extent; unfortunately, however, sooner or later the edema and other manifestations reappear and the patient finally dies from uremia, exhaustion, heart failure, pulmonary edema or secondary inflammation of the serous sacs. (Wilcox, 1908.)

You could continue these excerpts *ad infinitum* and find they are simply repetitions one of the other and that they give you little or no encouragement from a therapeutic standpoint and but precious little from a dietetic standpoint. You have all got text-books and can read this up as well as I can. I think possibly I can approach this subject from a different angle and leave a more lasting impression on your minds. So I will call your attention to the *Specter*.

You have all had a patient come into your office and tell you that he does not feel well. He is suspicious and asks you to make a thorough examination. You ask him to describe his case. He mentions first of all that for months he has had a cough of a bronchial nature. Sometimes the sputum is a little colored. Occasionally he has pain in his chest and he is of the opinion that he has a slight chill of a morning followed by fever in the evening. This is followed by night sweats. He is losing flesh, is not so vigorous as he used to be, his heart beats faster and certainly there must be something more than ordinary the matter. You get your phonendoscope and your sphygmomanometer and make a thorough examination of his lungs and carefully ascertain his blood pressure. You percuss and palpate and auscultate. You look wise and in an abstracted, absent minded way you gaze out of the window till the patient awakens you from your reverie by asking you "what did you find?"

Then you confess that there is a slight hypotension, and that the respiratory murmur in the apex is not as well defined as it should be, but you slap him on the shoulder and tell him not to worry for this thing may be temporary and if so it will clear up in a few days. You, however, ask him for a specimen of sputum to send to the laboratory and again encourage him not to think about it and be cheerful.

Again another patient comes in and says "there must be something the matter with me besides

*Read before the Douglas County Medical Society, March 3, 1921.

what ails me." "Why so," you ask him. He replies: "I have such a languid feeling. I dread to get up of a morning. I am losing flesh and I have no endurance. I can't sleep at night. I have neuralgic pains. I am tremendously thirsty. I am hungry all the time. I eat so much that I have been offered money if I will stay away from the restaurant when they are giving dinners at a fixed price. No difference how much water I drink, it does not quench my thirst." And many other details of a similar character. Your suspicions are aroused and you at once ask for a sample of urine. Using the old Boettger test the urine boils out as black as a crow. The specific gravity is 1034. You assure him he need not grow alarmed and that in all probability, if he will bring you another specimen in a week's time the specific gravity will be normal and the discoloration will not show on boiling. He is very anxious and would like to know how real healthy urine looks when given such a test. You are very confident of yourself and say to your patient, I will show you by taking a specimen of my own urine and will give it the same test and then you can compare them. You want to make sure there is no albumin before making the Boettger test, so you place a small amount of chemically pure fuming nitric acid in the bottom of a test tube and allow the urine to trickle down the side of the tube. Holy Moses!! There is a white ring forming between the acid and urine. You explain to your patient that undoubtedly the tube has become contaminated and that in another tube you will try the boiling test. The sample is beginning to boil and instantly is becoming cloudy. You have thoroughly boiled the urine now and it is cool. The coagulated albumin settles to the bottom and occupies at least one third of the space occupied by the urine. You turn to your patient with a sardonic grin on your face and try to humorously say that you guess you are not the perfect specimen of manhood you thought you were, but you try to deceive yourself just as you tried to deceive your patient, by remarking that certainly this is only for the present and another specimen a few days hence will no doubt show up all right. It won't work in your case, and you forget to finish his prescription and sit down at your west window and gaze most meditatively at the western horizon. It is the spring of the year, the foliage on the hard maple is becoming very dense. Your office is

surrounded by these trees and is rather dark at best when they are in foliage, but somehow, it seems much darker than usual. The fruit trees are all in bloom. The apple, pear, peach and plum are giving off their fragrant odor. All nature seems to be dressed in its bridal robes. You have been enjoying all this to your fullest capacity, but this discovery seems to produce an opacity of your mental crystalline lense and you can no longer distinguish the beautiful from the common place. The rays of the sun do not appear so bright. The reflected light of the moon only increases your knowledge of the opacity of this psychological cataract. You say to your patient, it is growing dark low down in the west as if we might have a storm. He comes to the window and looks in the same direction you are looking but declares he sees no cloud. You assure him the cloud is becoming more dense, that it has a swirling motion and that it is developing very rapidly. Now you say to him, do you not see that hideous thing? Don't you see that formation in the center of that swirling mass? He still protests that you are suffering from a delusion and you carefully and in great detail try to point out the formation which is showing up more perceptibly every minute. It does not seem to be man, bird, beast, or fish. It is not a piasa nor an octopus but as its shape and form more fully develop you shudder and are convinced that it is possessed of all the degenerate and vicious elements that ever inhabited an animate thing. In other words, it without doubt, possessed all the devil that failed to get into the swine when Christ cast him out of the Gadarenes. Its mouth was of the form and shape of an enormous catfish, sufficiently large to swallow a man. The fast sloping head left practically no face nor forehead in which to place eyes, but in the center of this almost flat head was one enormously large eye of a blue green color. It never batted nor looked in any other direction. It reminded one of old Cyclops in his cave, only this hideous thing looked so much more depraved than Cyclops did the last time you saw him that you are persuaded if this is a descendant, he is far removed. The gaze was fixed intently on you and as the body emerges farther out of the water it lifts what appears to be its arms and hands, from which drop a slimy ooze and pointing the index finger directly at you, it forms the letters that spell out "*Mene Mene Tekel Upharsin*". You ask

your patient: "Was that lightning?" He declares he saw nothing; but by close inspection you discover that with each exhalation of this hideous creature there is a phosphorescent light and a most disagreeable odor emanating from his widely distended nostrils. You are startled and ask was that thunder? but find that it was the ethereal waves set in motion by the pounding of this monster's wings or fins on the surface of the sea of life and that it is heard throughout the length and breadth of the universe and this being attuned your own heart beats, affects your tympani, hence the thundering noise. You are making an heroic effort to accommodate yourself to the circumstances when there is a perceptible tremor and you think there must have been an earthquake out in California. You consult your seismograph and carefully scan the dial and find no disturbance. You are about to decide that you are growing nutty when you discover it is your knees knocking together that produced the tremor. Glancing again to the west you see this hideous specter has advanced much nearer to you and in his onward rush to satisfy his voracious maw he is swallowing every victim that he takes into his slimy embrace. He is exceedingly defiant and aggressive and fearing you may not get his name he again supports himself on the destructive waves that ever wash him nearer to his victim and pounding the sea till it sounds like distant thunder he lifts that long claw-like arm and throwing out that phosphorescent light spells his name like the electric sign, letter at a time in bold script so it may be read by the whole world—

CHRONIC NEPHRITIS.

PUBLIC HEALTH PROBLEMS

C. W. LILLIE, M.D.

EAST ST. LOUIS, ILLINOIS

There are several reasons why doctors should be interested in all public health activities, but I have but a single reason for inflicting you with this subject. That single reason is that it is about the only subject with which I am on friendly terms at this time.

While I have had a reasonably fair conception of most phases of the health question for a number of years it was from the point of view of the general practitioner; was only as broad as any

single viewpoint could make it; and when I came to look at the subject from a different angle I find so many features not before observed that I feel justified in calling attention to some of the more prominent ones.

It is not to be expected, I hope, that I shall offer anything new or novel, but if I can recall a few of the half—or wholly forgotten—facts as I see them, and secure for them a small share of your consideration I believe I will have done something for the public in which I am interested, as well as for the medical profession in which my interest is still greater.

In the matter of vital statistics our state is still outside the "registration area" for births. The doctors in every community can aid very much in placing the state in its proper relation to the country. This can be materially aided, not alone by prompt reports of births but by their educational influence in the community among their clientele and through the schools. There are comparatively few persons who realize the importance of the school for the dissemination of health knowledge.

Go into any school and talk ten minutes on the best means for maintaining health and you will have the essence of your remarks distributed to as many families as are represented there.

The public has recently been awakened to the necessity for accurate record of births. This has come about through the experience gained in the late war. Many a boy was enabled to enter military service because a birth record showed him to be of proper age. A few were kept out of service because their parents were able to prove them under the draft age. A smaller number have been released from service on being able to show they were too young to enlist without the consent of parents. Nearly every industry now requires a birth record before employing a young person.

Once get the young to understand the importance of having a record of birth and the parents will see that it is made.

It may be urged that this is not a "health question" and hence is not true to the title. But if it is only an economic question its relation to public health is such that it is placed in the hands of health officers and they need the support and co-operation of the doctors in every phase of their work.

I have a very good example of the neglect of a

*Read before the 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

registrar to make returns to State Department.

On October 4, 1920, two villages and a township were combined with East St. Louis, no reports from these having been made for several months.

From one of these I received a few days ago thirty-five "original" birth certificates and one "original" death certificate which should have been forwarded to the State Department of Health months ago.

In the matter of communicable diseases one dishonest doctor, or an ignorant one, or one ignorant or designing householder, may cause the starting of an epidemic which will do more harm than the burning of whole blocks of buildings in any city.

We can see many examples of this kind. Take the recent, and still present epidemic of smallpox for one illustration. In one rural and small urban community more than fifty cases of smallpox resulted from a mistaken diagnosis of the first case, which was called chickenpox. And this in an adult, too.

Diagnosis is often difficult, but when a doubt exists the public should have the "benefit of the doubt."

In such communicable diseases as syphilis and gonorrhea there is the greatest room for deception, and the greatest harm will result from the deception. Here we find the grossest ignorance of the effects of these diseases, an ignorance the more deplorable because so many innocent victims suffer because of it. The number and character of these innocent victims is often a subject of profound reflection for the surgeon. A single case of gonorrhea subjected to self-treatment, or to treatment by friend druggist, until external signs disappear, may be the cause of a laparotomy a few years later in the wife of the self-treated young sport, with a probable loss of her life; certainly with a great loss of comfort and happiness to her; and often to permanent blindness in her offspring.

If syphilis is acquired the results are usually still worse under the secretive method of treatment. Early symptoms may disappear under any form of treatment, or even without any treatment, but the disease is never cured except under the most intensive treatment. And then the cure must be susceptible of proof. In the common communicable diseases of childhood there is need

for a more liberal education in the public mind.

There is such a woeful lack of knowledge of the dangers of these diseases that many a tragedy grows out of this very ignorance. Many a mother's heart is wrung by the death of a beloved child in which she has been a party to the tragic end. She has deliberately permitted her child to become exposed to disease under the mistaken idea that this was a heritage of childhood and must be had and "over with," a not unusual remark among a certain class—the class in need of health education; and not always the truly ignorant.

Another pernicious practice, responsible for a large percentage of diseases of childhood, is that of running in "to see what is wrong" when a doctor's carriage is seen to stop in front of a neighbor's house without waiting to learn the nature of the illness for which the call is made. Too frequently the children follow "mamma" and thus expose themselves to contagion. Doctors can aid in the work of disease prevention from this source by education of their clientele. And, as said before, the child can be utilized for this purpose.

Of course we must admit that there are those who cannot be taught, and these, like the poor, will always be with us.

Just why any sane person can offer an objection to any known means of "preventing disease" is a mystery, though it may be a question if any strictly sane person ever does take this stand, and yet there are those who object to vaccination against smallpox. Others oppose the use of anti-toxin as a preventive of diphtheria in exposures; and some oppose it as a curative agent. Strange to say, there are a few doctors who decry its use. These latter are of the "old school," or probably we should say the "old fool" type; a type fast disappearing, and let us hope soon to become extinct. These, however, constitute one of the obstructions to improved health conditions in many communities.

A health problem of immense proportions in all the larger cities, and to a greater or less extent on small cities and villages, is the "housing" of the laboring class. A survey in any city will disclose the fact that many of the people live in tenements unfit for human habitations. Buildings with rooms without light, and ill ventilated, and housing a number of persons far be-

yond the limit of safety. Here live hundreds of workers in an atmosphere foul beyond the conception of even the landlord who owns the building.

This class, which must subsist upon a meagre income, must economize by crowding into as small a space as possible to save in rents which at best forms so large a share of the family expense; and in winter the danger from this overcrowding is greatly augmented by the closing of all windows or other means of ventilation, in order to save fuel, thus lowering the resisting powers of the body and favoring the invasion of any form of disease and rendering the victim an easy prey, especially to the various forms of pulmonary disease.

OCCLUSION OF THE LEFT POSTERIOR INFERIOR CEREBELLAR ARTERY

LELAND H. ANDERSON, M. D.

AURORA, ILLINOIS.

According to Gillis¹ the syndrome of occlusion of the posterior inferior cerebellar artery is as follows: "sudden onset with giddiness and marked tendency to fall toward the affected side; no loss of consciousness; difficulty with swallowing and occasionally with phonation; loss of appreciation of pain, heat, and cold over the part or the whole of the trigeminal area on one side of the face (usually the side of the lesion) and a corresponding loss of pain and temperature sense over the opposite side of the body from the face down; touch, tactile discrimination, deep pressure and muscular sense are intact; paralysis of the sympathetic on the side of the lesion, causing retraction of the eyeball, contraction of the pupil and drooping of the eyelid; ataxia of the arm and leg, usually on the side of the lesion."

He goes further to say that in the course of from two to six months practically all symptoms disappear, other than the sensory changes, which usually are permanent.

Breuer and Marburg² show that, experimentally, occlusion of the posterior inferior cerebellar artery can not readily be distinguished from occlusion of the vertebral artery.

Hall³ quotes Salmon⁴ as stating that 88 per cent. of the cases of thrombosis of the postero-inferior cerebellar artery occur in alcoholics, and syphilitics, and further that the symptomatology

of thrombosis of this artery is analagous to that when the vertebral artery is involved. Wallenberg⁵ states that persistent difficulty with deglutition indicates involvement of both the vertebral and postero-inferior cerebellar arteries, while transitory paralysis may be due to involvement of the latter vessel alone. In addition he found that there is often only one of these vessels present, and that usually the left.

In his report Hall³ studies and lists the involvement of the cranial nerves, concluding "that the sensory portions of the fifth, sixth, seventh, eighth, ninth, tenth, eleventh and twelfth nerves have all been recorded in one report or another as having been involved, but not all have been involved in any one case. The spinal or sensory root of the fifth nerve on the side of the lesion has been involved in every case reported. Vestibular symptoms due to involvement of those fibres entering the inferior peduncle especially are present in all the cases reported."

Spiller⁶ states that Duret probably first pointed out that the left vertebral was most commonly the seat of obstruction, having embolism in mind, but that Senator in 1881, expressed the opinion that the left vertebral seemed more subject to thrombosis, possibly because its course is more in the line of direction of the subclavian artery, and also because it has higher blood pressure. These factors may influence the postero-inferior cerebellar. He goes on to quote a case of Hun's⁷, which at necropsy revealed a surprisingly large area of softening in the medulla [due to occlusion of this artery] but unaccompanied by any widespread clinical features.

A similar case, one of thrombosis of the right postero-inferior cerebellar artery, is reported by Fisher⁸, together with the results of testing the semicircular canals. The responses of all canals, in both ears, to both the turning and douching tests were normal except one. Douching of the right ear, with the head 60 degrees back (which tests the right horizontal canal) did not produce vertigo, or past-pointing, although it produced normal nystagmus. According to Jones⁹, ear stimulation produces but two reactions, (a) nystagmus, and (b) vertigo. One normal response is sufficient to show the integrity of the particular canal under examination. Fisher therefore reasons that, since all other responses were normal as regards nystagmus, past-point-

ing, vertigo and falling, both VIII nerves, and both labyrinths were normal. Because of normal responses from both vertical canals (the superior and posterior canals act together and are considered as one, vertical) the pons appeared to be uninvolved. The cerebellum appeared unaffected because of the presence of normal past-pointing of the upper extremities (a cerebellar reaction) when the vertical canals were stimulated. Therefore he concluded that there was a lesion at the junction of the medulla and the pons, in the

facial involvement, together with the sympathetic syndrome, i. e., drooping lid, contracted pupil, and enophthalmos, and other cranial nerve disturbance variable. Nevertheless, it may not be amiss to report an additional case, which at first presented a puzzling differential diagnosis. The clinical diagnosis cannot be verified, as the patient has made an almost complete recovery.

REPORT OF A CASE

Mrs. B. C. McM., aged 33 years, housewife, was admitted to the hospital as a patient of Dr. J. W

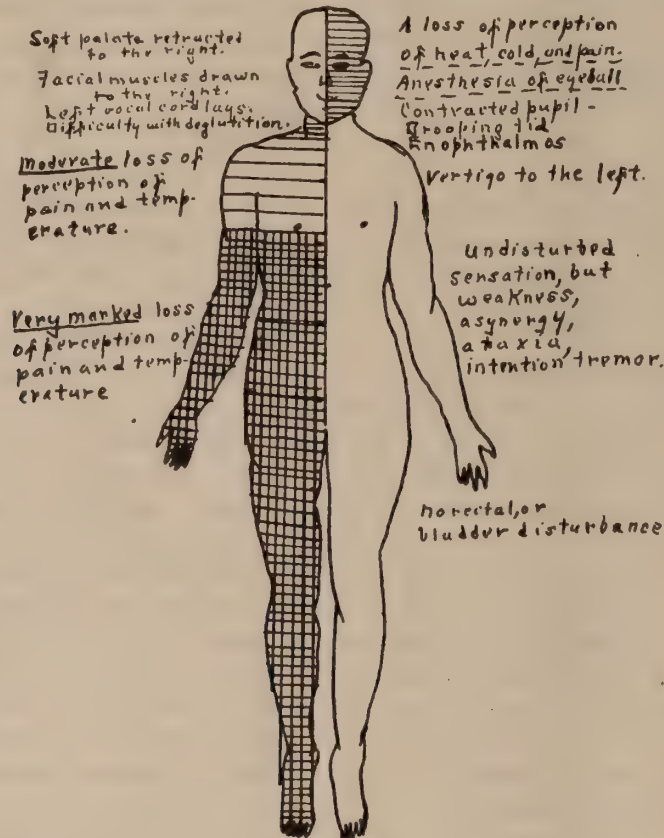


Fig. 1

region of the right inferior cerebellar peduncle, which was responsible for the absence of vertigo and past-pointing. Former autopsies in cases of occlusion of the posterior inferior cerebellar artery "have shown that the lesion is always situated in this part of the medulla oblongata." The neurologic findings, previously made, coincided with his conclusion.

The symptom complex, above mentioned, is relatively simple: loss of pain and temperature sense on one side of the face, and the opposite side of the body, with paresis, ataxia, and asynergy of the same side of the body as the involved

Dreyer, on February 16, 1921, at 3:30 p. m. complaining of dizziness, headache, pain in the left arm, and difficulty in vision. She had a temperature of 99, a pulse of 58, and a respiration rate of 18.

Family and personal history were negative, except for the following facts: bilateral suppurative otitis media at the age of six, primary left sided pleurisy at nine, appendicitis at thirteen, with recurring attacks for the next five years, until operation in June, 1906.

Between this time and January, 1921, she had had four attacks of "sore throat," only one of which (1918) necessitated medical attention. The present illness dates from the last attack, which began in January. The belief is that the infection was transferred to the patient and her small daughter from another member

of her household. She was not sick, and sought no medical advice at that time. A week later, about the first of February, she awoke with "a stiff neck," and for the next few days felt as though she had "taken cold." Four days following, a sharp boring pain in the top and the right side of the head and face was experienced; nausea was pronounced at the height of the pain. On February 10 a physician was consulted; dental films were suggested. While on the x-ray table she began to cough severely, and to notice a sharp tingling pain in the fingers of the left hand. Immediately the headache increased, and pain radiated down into the left arm, followed by weakness, nausea, vertigo to the left, and double vision. Dr. Dreyer was called and the patient removed to the hospital, where, shortly after admission, projectile vomiting occurred.

Physical examination revealed the following: The

Left. A paresis of the left arm and leg was present. These extremities exhibited marked asynergy and ataxia. Past pointing was to the left, and all movement was accompanied by a sort of intention tremor. The grip of the left hand was much diminished.

Right. Loss of perception of pain, heat and cold was present over the right side of the body below the neck (more pronounced below the nipple) and the left side of the face. There was some disturbance of tactile sensation and muscular sensation over the same areas. There was no motor change, no asynergy, no tremor. Past pointing was normal.

There was no rectal or bladder disturbance. (See Fig. 1.)

Roughly attempting an analysis by cranial nerves:

Olfactory: Not demonstrably involved.

Optic: No demonstrable impairment of function in

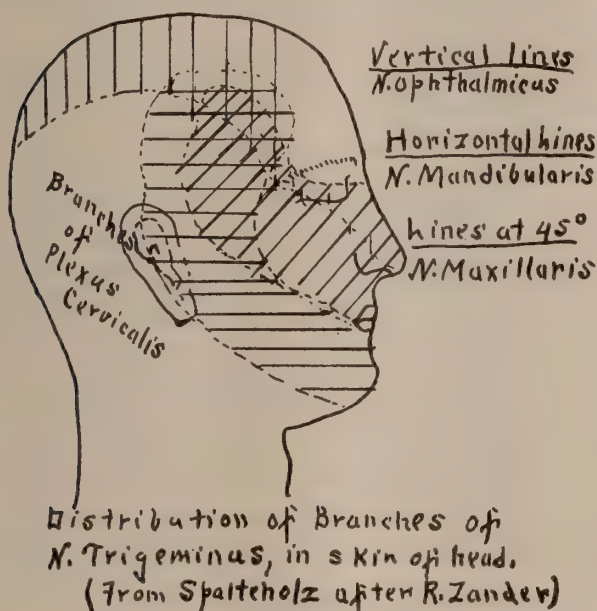


Fig. 2.

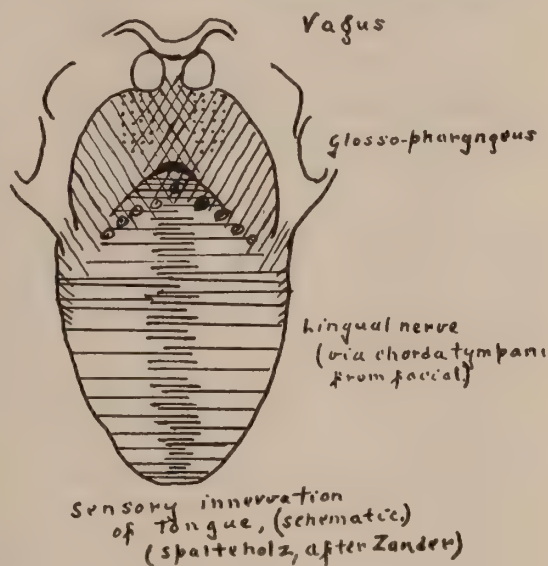


Fig. 3.

patient was a middle aged woman, of about 165 pounds, lying curled upon her left side with eyes closed tightly. Her systolic blood pressure was 126, diastolic 64, pulse pressure 62.

There was moderate rigidity of the neck, with a slight Kernig, more pronounced upon the left side. The triceps, patellar, and Achilles tendon reflexes were exaggerated upon the left. No Babinski was present. No ankle clonus was present. Both eyes reacted to light and accommodation and the consensual reaction was present. The left pupil was small, the left lid drooping, and the left eyeball somewhat retracted. Rotatory nystagmus to the left, occasionally becoming spontaneously vertical was noted. There was marked drawing of the uvula to the right, together with protruding of the tongue slightly to the left. The voice was noticeably hoarse. Attempt to swallow liquids produced coughing, but was achieved after several slow trials. Photophobia was marked. The left corneal and conjunctival reflexes were absent. The abdominal reflexes were not altered.

either separate eye. No change in the disks or retinae as seen by ophthalmoscope. (Sympathetic syndrome: enophthalmos-contracted pupil-drooping lid.) Possibly photophobia(?).

Oculomotor: Drooping lid possibly partly from this involvement.

Trochlearis: No involvement.

Trigeminal: Involvement of the left ophthalmic and maxillary branches in their sensory areas over the (see Fig. 2), with absence of pain on pressure over the left supraorbital nerve. Anesthesia of the eyeball (left).

Involvement of the mandibular branch, with poor left masseter innervation, and diminished tactile and pain(?) sense on the left half of the tongue. Keen differentiation of taste was impaired, possibly through interference with chords tympani fibres from N. VII. (Also X.)

Abducens: Left external rectus markedly involved.

Facial: Moderate left sided involvement, with drawing (especially the mouth) to the right. The

frontalis muscle on the left side was unimpaired, suggesting a nuclear lesion.

Auditory: The cochlear branch showed a slight nerve deafness on both sides.

Barany tests on the vestibular branches were not attempted because of the dizziness and nausea, Vertigo was to the left. Left rotatory nystagmus, occasionally becoming vertical.

Glossopharyngeal: Difficulty in initiating deglutition. Taste disturbances. (See Fig. 3.)

Vagus: Inability to swallow quickly and readily. Early difficulty in phonation, with hoarseness, together with lagging and lessened tension in the left cord.

Probably paralysis of the soft palate may be included here. Disturbed sense of taste.

Slow pulse rate.

Spinal-accessory: Possibly slight flattening and dropping of the left shoulder.

Hypo-glossus: Slight transitory protrusion of the tongue to the left. Taste disturbances.

The blood findings were negative, except for a white count of 10,100. Blood cultures were negative at the end of 72 hours. The leucocytosis disappeared by the third hospital day. Wassermann negative.

Spinal puncture was done by Dr. Harlan Anderson. The fluid was under markedly increased pressure, clear and limpid, and with a trace of globulin (Nonne). It contained 85 to 90 cells per cubic millimeter, 90 per cent. of them lymphocytes. Cultures were sterile at the end of 72 hours. Wassermann negative.

Following the puncture, the pulse rate rose gradually from 58 to 78 or 80, and later reached from 96 to 100, without assignable cause.

The temperature never rose above 99, lasting but 36 hours after admission.

The urine, which on admission was negative, on the second day show a few granular casts, with a slight trace of albumin. It cleared by the sixth day. A phenolsulphonphthalein test done a few days later showed 70 per cent. at the end of two hours.

On the evening of the second hospital day, Drs. Peter Bassoe, and Alexander Harvey were called in consultation. A diagnosis of thrombosis of the left posterior inferior cerebellar artery was arrived at.

The clinical course was uneventful. The rotatory nystagmus gradually diminished until on April 3, some 45 days later, it appeared only when looking to the extreme left. The vertical nystagmus (indicative of brain stem lesion) disappeared at the end of the third week. Swallowing appeared much improved by the fifth day, and in two weeks was apparently normal. The hoarseness and partial aphonia followed the same course. Motor control of the left side increased, with less ataxia, until at the end of three weeks she was allowed to begin a slow progressive re-education of that side. Disturbance of temperature and pain sensation on the right side has improved, and instead of being general and absolute, has assumed, in part, certain areas of the cutaneous nerve distribution quite clearly. The anesthesia and paresthesia of the left side of the face has decreased strikingly. There is some

atrophy of the left side of the tongue, as well as of the left hand, with whitening and smoothing out of the skin wrinkles of the latter. The left paralysis of the palate in a measure persists. Walking is now done without a cane, and without the necessity of watching each separate step, as at first. The gait is a wide waddle, which becomes, at times, a "propulsion" type. Tonsillectomy will be performed after the improvement justifies operative procedure.

Comment.

This case bears out the conclusion of Gillis as to a consistent symptom-complex, which is relatively simple, yet sufficient to justify the diagnosis. It is to be hoped that future cases may have the valuable advantage of reports of the examination of the semi-circular canals.

Terminal Building.

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SOME POINTS IN THE DIAGNOSIS OF LATE HEREDITARY SYPHILIS*

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The recent conflict with its resultant campaign against venereal diseases has brought home to all of us with renewed emphasis the extreme importance and widespread character of acquired syphilis. One does not err surely in advancing the hypothesis that the hereditary type is of equal importance. The late Dr. Krost read a scholarly paper before this Society two years ago which was largely devoted to a discussion of the earlier lesions of inherited lues. I shall not, therefore, touch upon that phase of this question but shall endeavor to briefly describe and also emphasize

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certain points which have been of value in the diagnosis of late hereditary syphilis.

First of all, a systematic method of examination should be the rule. One should begin by obtaining as accurate a history as is possible of the ascendants and collateral branches of the patient's family. Particular attention should be paid to discovering any evidence of infantile polymortality which might be due to (1) frequently repeated abortions; (2) premature births of infants which were still born or moribund; (3) infants still born at term or dying soon thereafter; and (4) infants dying during the first weeks or months after birth.

Just as in the patient's personal history those examined should be particularly questioned with regard to any disease of childhood or infancy and also as to whether or not development was tardy.

Besides this the presence of skin lesions, throat trouble, eye disease, discharging ears, pains in the bones with or without swelling, headache and convulsions should also be carefully sought for.

In the event that the patient has descendants they should of course be examined in a similar manner.

General Physiognomy:

a. Evidences of infantilism should be looked for in addition to cranial stigmata such as a bulging of the frontal regions resulting in the Olympian forehead. The natiform skull, hydrocephalus, as well as facial and cranial asymmetry ought also to be kept in mind.

b. Such facial stigmata as saddle nose, lorgnette nose, hare lip and prognathism should be sought for.

c. On account of its importance Hutchinson's triad is considered apart. A history of impaired or lost hearing, especially in early life is of importance. The presence of tympanic lesions and deaf mutism are also of value.

An examination of the eyes including the fundi is also of extreme importance. Late inherited lues may appear as corneal lesions (interstitial keratitis), iridic stigmata, as well as those of the fundus. Malformations and strabismus are worthy of mention.

The dental stigmata go to complete this syndrome. Among them the Hutchinson teeth, screw driver teeth, atrophy of the cusps of the first molars, and multiple and systematic cuspid erosions are the most important. Dental vul-

nerability, abnormal separation and absence of certain teeth are stigmata of less value. In this connection maxillary malformations and the ogilvate or roof-life palate are also worthy of mention.

d. Stigmata of the cutaneous and mucous surfaces are most often scars. Those radiating from the mouth and Parrot's scars of the lumbosacral region are important. Active lesions such as gummata and tuberculo-ulcerative lesions of the skin and mucosae may be encountered.

e. Genital stigmata consists of atrophy and faulty development of those parts. This is especially true in males who may present either a sarcocele or a small hard nodular testicle called by the French the "bean-like" testicle.

f. The stigmata of the locomotor system are especially important including the celebrated sabre blade tibia, as well as exostoses and periostitis. The tibia is a favorite site for such abnormalities. Lesions simulating those of rickets are also found in association with late hereditary syphilis. A malformation to which the French attach importance is the funnel-like chest due to a sinking in of the lower part of the sternum. The xiphoid appendix may be wanting.

g. Among the nervous stigmata are headache, convulsions and disturbances of the reflexes, especially the pupillary, patellar and tendo Achillis. The presence of epilepsy and Little's disease, as well as juvenile tabes and paresis should be looked for.

h. Intellectual and moral abnormalities are also found in cases of late inherited syphilis. Gigantism or a dwarfed stature may also be associated with it. Women suffering from this type of lues have given birth to monsters, such as anencephalic, proencephalic and exencephalic. Syndactylism, polydactylism and ectrodactylism have also been observed.

Description of certain of the more characteristic stigmata:

Believing that some of these by reason of their importance merit a more than passing mention I shall devote a little time to them. In this way Hutchinson's triad, the sabre blade tibia of Lannelongue, the peri-buccal scars of Fournier and the natiform skull will be considered. Of the three members of that syndrome so well described by Jonathan Hutchinson it seems to me that interstitial keratitis deserves more prominence

because of its greater frequency. The relics of this disorder are (1) deeply seated opacities situated in the parenchyma of the cornea; (2) the cornea does not exhibit any facetting or depression, because of the location of the lesion; (3) a fine vascular network usually persists in the deeper portion of the cornea for several years at least; and (4) the affair is bilateral as a rule. The teeth which go to make up this syndrome are characterized by their crescentic or semilunar notched free borders, peg shape and their convergence toward each other. The upper central incisors of the permanent set are the ones usually affected. Rarely such teeth may resemble a screwdriver and converge toward each other but lack a notched border. A very few cases of a single Hutchinson tooth have been reported. Other teeth than those mentioned may present the attributes of the typical Hutchinson tooth. One should remember that not every notched tooth can be considered as belonging to this group unless it possesses the three attributes as outlined by Hutchinson himself, viz.: Semilunar notching, oblique convergence and peg shape. In addition he only applied this term to the upper median incisors of the second dentition. The notch is gradually worn down and finally disappears toward the thirtieth year according to Edmond Fournier which is an important point to keep in mind.

The most unusual member of the trio is that which affects the sense of hearing. It is characterized by (1) an abrupt onset; (2) rapid progress, sometimes so precipitate as to compromise the hearing within a very few weeks; (3) intensity of symptoms; (4) clinical absence of lesions susceptible of interpretation; and lastly (5) by its almost constant resistance to specific treatment.

The peri-buccal scars which radiate especially from the labial angles and also from the lips are of extreme importance. As time goes on they become less prominent but are indelible evidence of lesions in early life. Not uncommonly they affect a fanlike arrangement.

The sabre blade tibia presents an anterior convexity and is moreover flattened from side to side, thus simulating to a surprising degree the weapon to which it has been compared.

The natiform or hot cross bun skull is formed by a bilateral, spheroidal bulging out of the occipito-parietal regions. The two eminences

thus formed are aptly compared to the buttocks.

The Argyll Robertson pupil and absence of the tendo Achillis and patellar reflexes are extremely important stigmata from the standpoint of late inherited nervous lues.

A list of other stigmata which are also of value might include the sunken or saddle nose, the bulging or Olympian forehead, the keel shaped forehead, the presence of circular or polycyclic cigarette-paper like scars, tibial nodes, erosions or other dental anomalies when one or more sorts of teeth are affected in a systematic manner, a small hard nodular testicle with no history of preceding injury or disease as mumps, funnel chest, etc. To attempt to enumerate all of the stigmata which have been observed in late hereditary syphilis is not within the scope of such a paper as this. I have merely tried to mention and emphasize those which are of the most importance as diagnostic aids.

The Wassermann Reaction in Late Hereditary Syphilis. In a series of 68 cases of this type, all Wasserman positive, Raviart, Breton and Petit found various stigmata to be present as follows:

Hutchinson teeth, 4 times, or in 6 per cent.

Interstitial keratitis, 4 times, or in 6 per cent.

Sabre blade tibia, 7 times, or in 10 per cent.

Olympian forehead, 6 times, or in 9 per cent.

Saddle nose, 4 times, or in 6 per cent.

Ogilvate palate, 24 times, or in 36 per cent.

These same clinicians in a series of 232 cases, all Wassermann negative, did not find a single example of such stigmata as Hutchinson teeth, interstitial keratitis, or sabre blade tibia. The other stigmata of late inherited lues were proportionately infrequent. As a result of these findings they concluded that these stigmata and a positive complement fixation test often coincide in the same individual.

In 27 instances of late hereditary syphilis Boas found a positive Wassermann in all but one. In his opinion that reaction is of special value when positive in association with but a single stigma such as interstitial keratitis.

Schumacher ascertained that in a series of 20 cases of interstitial keratitis that all but 3 gave a positive Wassermann.

A recent study of 100 male criminals at the House of Correction, Chicago, among whom 39 per cent. presented stigmata which have been described in connection with late inherited syphilis, has convinced me that the more characteristic

stigmata are rare and that when present they are not necessarily coincident with a positive Wassermann reaction. Twenty of these cases exhibited roof-like palates, this being an isolated symptom in all but four of them. In only two cases was this stigma associated with others of importance. One prisoner possessed in addition well marked remains of Hutchinson teeth and a bulging or Olympian forehead. The other presented cupola-like erosion of the incisors and canines, several of which were abnormally small. Both of them gave a negative response to the Wassermann reaction. A history of infantile polymortality was obtained from nine of these prisoners. In two of them stigmata of late inherited syphilis were present. One other instance was apparently due to tuberculosis.

The Therapeutic Test. In doubtful cases with negative Wassermann this time honored measure is of particular value. In the pre-arsphenamin era it was, as we know, carried out with mercury and the iodides. Now, of course, we have in addition arsphenamin, neoarsphenamin and the newer arsenical agents as silver salvarsan. This test was early recommended by Fournier and present day syphilographers still cling to it. Leredde is a strong partisan of this therapeutic test and rightly insists that such a course of treatment should be sufficiently intensive, in the absence of contraindications, to bring about an effect.

He recommends neo-arsphenamin in the following doses: 0.15, 0.20, 0.30 and 0.45 grams one week apart or in cases requiring more care 0.10, 0.15, 0.20 and 0.30 gm. In old cases of neurosyphilis, suspected cardiac and renal involvement the latter would be preferable. The effect is naturally more marked and rapid in external lesions. In internal lesions it may require some time before any effect is noted. Leredde has ascertained that in cardiac lues the heart became more regular and slower in those affected with tachycardia while it increased in frequency in cases of bradycardia. In renal syphilis a gradual attenuation of the albuminuria has been observed.

Reactivation of the Wassermann Reaction. In a series of cases of late hereditary syphilis Renaud, a pupil of Milian's, to whom we are indebted for a large part of our knowledge con-

cerning this procedure, arrived at the following conclusions:

1. When the Wassermann is negative in a case of hereditary syphilis we can cause it to become positive by means of specific treatment.
2. The partial or total reaction obtained by the use of arsphenamin appears from the fourth to the twenty-third day following the injection.
3. This biological reaction augments considerably the symptomatic value of the Wassermann reaction. It serves as a sort of diagnostic proof and even though the Wassermann is negative it permits us to attribute to hereditary syphilis manifestations of apparently uncertain etiology.

4. The appearance of this reactivation in those presenting only dystrophic stigmata shows that they have inherited syphilis just as have those who exhibited more active lesions.

Reactivation has been secured by giving mercury or the newer arsenical preparations. Arsphenamin 0.30 gm. or neoarsphenamin 0.45 gm. (to younger patients in proportion) can be given intravenously and blood taken 5, 10, 15 and 20 days after. I have had but little experience with this test in hereditary lues but can testify to its value in the acquired form.

ILLUSTRATIVE CASES

One can do no better than to first of all cite in extenso Fournier's celebrated case of supposed inoperable sarcoma of the pelvis. Having been called in consultation by three well known Parisian surgeons he was asked to ascertain if there might not be a possibility that the tumor was of syphilitic origin even though the patient vigorously denied ever having had any venereal disease. After one of his customary thorough examinations, Fournier was unable to discover any evidence of syphilis save a history of infantile polymortality. The patient stating that he had had fifteen brothers and sisters, twelve of whom had died, most of them in infancy. After ordering that an ophthalmological examination be made Fournier deferred his diagnosis until that measure should have been carried out. That same day he was visited by an older brother of the patient already referred to. He vouchsafed the information that their father had been syphilitic. In compliance with his request he was also carefully examined with a negative result so far as syphilis was concerned. He was likewise referred for an examination to the same ophthalmologist who examined his brother. On the day following, Fournier received this report: the eyes of the first patient were negative, those of the older brother showed characteristic evidence of hereditary syphilis; namely, vestiges of an intense chorioretinitis, especially

marked in the right eye. As a result of these findings the first patient was at once put upon anti-leptic treatment consisting of daily intramuscular injections of mercury benzoate supplemented by potassium iodide, sixty to ninety grains daily. Within ten days to the astonishment of all an improvement was noted. After three weeks treatment the growth had diminished at least one-third. After two months it had disappeared and the patient had gained almost twenty pounds. Six years later he had a recurrence of the pelvic growth which was again mastered by the same agents. The patient very appropriately remarked that he had been saved by the eyes of his brother. This case also lends support to Ricord's saying "Happy is he with a tumor who has had syphilis". It serves to emphasize the importance of careful history taking, of a thorough examination, of having syphilis in mind at all times and also the value of the therapeutic test.

Female, white, aged 32 years. Marked interstitial keratitis. Trouble began in right eye about 4 years ago. She was treated by a physician who did not recognize the true state of affairs until too late. Now she sees but little with that eye. The disorder appeared in the left eye about 1 year ago. History negative as to father, mother, husband and patient's two children. Her older sister has also had interstitial keratitis plus gummata of right lower leg. W. R. three plus.

I recall the case of a girl 7 years old with a swelling of the shaft of the left radius suggesting osteo-sarcoma. The x-ray did not confirm that diagnosis but showed syphilis. The left upper median incisor was of the Hutchinson type. Wassermann reaction four plus.

Male, white, aged 34 years. Numerous circular cigarette paperlike scars over anterior aspects of both lower legs varying from dime to quarter sized marking sites of "sores" which appeared 17 years ago. Father died of paresis—an older brother still-born showing signs of active syphilis. Wassermann 3 plus.

CONCLUSIONS

1. Late hereditary syphilis is a remarkably protean affair and may simulate, as does the acquired form, almost any known disease.

2. There are certain stigmata, such as the Hutchinson triad, the sabre like tibia, the natiform skull and the peribuccal scars which may be said to be almost pathognomonic of that disorder.

3. From the standpoint of late inherited neuro-syphilis, the presence of the Argyll-Robertson pupil as well as absence of the patellar and tendo Achilles reflexes are of extreme importance.

4. The Wassermann reaction is a valuable aid but should not be permitted to displace sound clinical judgment. It should, I believe, be regarded as a valuable symptom when present. Its reactivation is also possessed of a certain value but like the Wassermann, does not possess an absolute value.

5. The Therapeutic test has been and remains a tried and true friend.

6. Physicians practicing in rural communities ought just like those of the larger cities and towns, to keep this form of syphilis always in mind. Recent statistics compiled by Leredde in France show that it is surprisingly frequent in rural France so why not in our own country?

7. When confronted with any apparent anomaly of the human structure, think of late hereditary syphilis and submit your patient to a searching investigation before dismissing him as free from it.

8. Other factors, notably alcoholism and tuberculosis can also produce stigmata much like those referred to but syphilis is most often the "African in the woodpile."

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A REVIEW OF THE MEDICAL ASPECT OF AVIATION*

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During the past few years aviation has passed from the experimental to the stabilized form of science.

It is now a business just the same as railroad-ing, motoring or sailing the seas. Before the recent world's war very little attention was given aviation from a medical viewpoint, although some thought had been given to this branch of the science as early as 1911. At the outbreak of the German invasion it became a means of hostility and thus it became an important matter for each nation to develop its aerial resources to the maximum extent.

In our own country we did nothing unusual, until two years after the opening of hostilities in Europe.

You are probably all conversant with the work done by the author during the latter part of 1917 and the beginning of 1918.

In February of 1918 I read a paper before this Society giving the results of experiments conducted upon accepted aviation cadets.

It was in March, 1918, that the Medical Research Laboratory was opened at Mineola, and the real experimental work of the Government begun.

Up to this time work done by other countries was individual, some doing more, while others did less, in trying to solve the medical problems pertaining to flying or the flier.

The history of the work done by the Government is published in detail in a book from the

*Read before the Chicago Laryngological and Otological Society.

Surgeon General's office entitled "Medical Air Service" and in this book very much valuable information relative to flying may be found.

At the suggestion of the Surgeon General's office, Professors Henderson and Schaefer of Harvard and Yale Universities were placed in charge of the Research Laboratory of our Government and it was their ideas which formulated most of the scheme of investigations which were carried on at the Mineola Laboratory.

Several years ago these two gentlemen, together with two eminent physiologists from Cambridge and Oxford, had done some experiments on Pike's Peak in Colorado to determine the effects of low oxygen tension on humans subjected to an altitude of 1,400 feet.

The thought advanced by Henderson and Schaefer was that being on Pike's Peak and at an altitude of 14,000 feet in a vertical dimension at any other place would be the same and if they tested for low oxygen tension on a mountain they would get the same result as would obtain in a flight in an airplane at that altitude at any place over a level country or at the sea level.

I called the attention of the Surgeon General's office to the fact that there was a marked difference in air conditions on mountains and at an altitude attained on level country by rising through the different strata of air such as we would experience over a flat country.

The observers failed to grasp the fact that the atmosphere flows over mountains like a blanket, while ascending through air on level territory you would get an entirely different condition as you would in the latter pass through successive strata of air.

I cited the fact that fliers could not cross mountains easily from the fact that they could sail a plane up one side of a mountain with ease while after they had reached the summit it was impossible to fly on the level on the far side of the mountain.

As a fact the plane going over a mountain experiences a downward current of air the moment they pass the summit and this will surely cause the plane to fall from non-support and the aviator can only save himself from a crash by sailing around the peak till he meets the upward flow of air as it mounts toward the peak from the direction he approached the elevation.

For example if the flier is sailing from east to

west he can easily climb the eastern side of the mountain till he reaches the top, when the down current will be so great he must veer to the north or south around the mountain to once more pick up the east to west current of air or he will crash on the west side of the mountain.

This phenomenon proves that air flows up and over mountains and therefore results found at the top of mountains will not be the same as conditions at a like altitude straight up in the air over flat territory.

In other words mountains do not, strictly speaking, stick up through the air. As a result of their theory of low oxygen the Harvard and Yale professors carried on their work at the Research Laboratory on this one thought as they thought that this low oxygen was the one and only problem to be met in aviation. It appeared to me that the test as instituted was not a test for the fitness of a man to become an aviator but was rather a test to ascertain how long a man could resist anesthesia, for that is all the test amounted to, as he was fed nitrogen gas in increasing quantity until he collapsed and his endurance was measured by the length of time he could withstand the poison and the result was registered in the low limit of the oxygen of his breathing mixture at the time he collapsed.

I have witnessed strong men who were alert and desirable fail in this test while others who were thin sickly looking fellows could go much further and yet looked to me to be inferior subjects for flying.

I do not wish to say the test has not good points but rather to say it was a one-sided test and if the flier were supplied with oxygen tanks, as all should be, they would not have to come in contact with the requirements of any such condition in actual work in a plane.

There is of course oxygen loss at great altitudes and if a man were kept in this medium without a supply of oxygen he would be under the same condition as is represented in this rebreather test, but it was a common practice before the war ended to supply oxygen through the Dreyer or Clark mask which machines fed the gas automatically as the altitude was increased and which shut off the supply as the altitude was lessened.

This machine did the same thing for the carburetor of the ship also as it is necessary to have

more oxygen for complete combustion of the fuel gas at great altitudes.

Men doing low flying do not require oxygen, but where the aviator was doing high flying the oxygen made him able to do more work without fatigue.

The test for a simulated flight which was used at Mineola was a very poor substitute for a flight as the tank was large and the journey into space was too slow, while the descent was in no way similar to the descent made by fliers in machines.

Then, too, they provided oxygen tubes so the man might or might not use oxygen during the test at any time and in any quantity great or little, as he chose, which amount was not measured at all, so each individual tested obtained a different air mixture, which made the test of no scientific value at all.

I had expressed to the Surgeon General's office that as there was a mask to obtain oxygen at the different levels automatically the test for oxygen want might be dispensed with, as there were other things which happened in flying which they should consider, such as the change in blood pressure and the loss of carbon dioxide gas from the body.

This suggestion fell upon a deaf governmental ear, and in my opinion they missed the main medical question pertaining to aviation.

As it appears to me the aviator should be tested as follows:

He must be found physically sound, which means he must have,

- A. A sound body.
- B. He must have good eyesight without glasses.
- C. He must have a functioning labyrinth.
- D. He must be put through a vacuum test for,
 1. Heart and blood pressure changes.
 2. Changes due to labyrinth stimulation.
 3. Changes in muscle strength for fatigue.
- A. It is not necessary to detail concerning a sound body.
- B. Good eyesight should mean 20/20 vision for the one eye and not less than 20/30 for the other.

Imbalance of muscles must not be sufficient to produce diplopia.

C. The functional labyrinth should not be

less than 8 seconds of nystagmus unless the man has been made immune by reason of practice, nor should his nystagmus be more than 35 seconds.

It has been found that the man who has a functioning labyrinth with a low nystagmus finding is less liable to vertigo than one with a more sensitive ear, which was brought out in my original paper and which the government would not accept at that time. The one will not experience vertigo while the more sensitive ear may produce bewilderment in the aviator and cause him to end in a crash from his confusion.

D. He should be subjected to a vacuum test which simulates an actual flight.

That is, he should ascend at the rate of 1,000 feet a minute and descend at the rate of 5,000 feet in thirty or forty-five seconds which is a fair average flight. He should be examined before and after the test for,

1. The pressure of his blood both diastolic and systolic, the character and rate of pulse, to determine if the blood stream is elevated or depressed, the pulse accelerated or retarded, or whether they remain unchanged.

2. The labyrinth should be examined after the test to find whether or not the ear is stimulated or depressed or remains the same.

3. The muscle fatigue as measured by the manometer or by measuring the accommodative power to determine how much fatigue is felt.

This will give us a key to the expected deportment of the flier and can be given from time to time to show the condition of the man as to staleness. Many of the rules formulated at Mineola were found to be incorrect as men were observed after training, and this was particularly true of the labyrinthian tests as expressed by vertigo.

Some of the earlier men at Mineola found that where men were turned repeatedly they developed an immunity to vertigo and when this fact was made known the work was stopped at once.

In actual practice with troops it was determined that vertigo could be lessened and the observations by Griffith at the University of Illinois showed that the reduction in vertigo as expressed by nystagmus could be reduced 50 to 100 per cent. in many instances and the immunity lasted for weeks and months, and where the immunity gradually lessened the subject did

not return to the original degree of vertigo on re-turning after a lapse of months.

In the work of Dr. Mosher and myself in which men were subjected to the vacuum test it was shown that vertigo was reduced in nearly all of our cases and in many instances to a degree of 50 per cent. with the one test of a few minutes.

We noticed the direct relation of nystagmus to blood pressure changes.

We found that not only were nystagmus and blood pressure altered but fatigue as represented by muscle strength which occurred in 80 per cent. of the cases examined and as I told you in my former communication that the material we had to pass upon was the same as that which was used by the Government, so our findings should represent the personnel of the aviator as he is.

Time will not permit of my detailing as might be done but I wish to ask your consideration of the following points:

1. It is definitely proven that men who have normal nystagmus can by repeated turnings decrease the nystagmus time more than 75 per cent. and in some cases to 100 per cent., and this immunity once attained will continue for several weeks or months.

That cadets trained in the orientator will obtain immunity quicker and can learn to disregard the labyrinth stimulation in 10 to 20 days with a practice of 10 or 15 minutes daily.

That nystagmus is cut in most cases to one half by a vacuum flight in a few minutes.

That the man who has a functioning labyrinth with the least amount of nystagmus makes the best aviator and this man can soon reduce his nystagmus to zero.

2. That the pulse and blood pressure are affected in practically all during the vacuum test and that where the blood pressure is elevated to a moderate degree the man is most fit to fly.

That when it is greatly depressed the man is liable to shock and syncope and is the worst possible risk as a flier, while in those whose pulse and pressure remain the same or nearly the same are considered fair risks as fliers.

3. That when muscle fatigue is more than 50 per cent. after the vacuum test the man is a bad risk, while the man who remains the same or the muscle force is elevated would be the very best risk as a flier.

It has been noted that many men have fallen to death.

These accidents are due to one of two causes, either from a fault of the machine, or a fault in the aviator.

Under the latter head would come men who become unfit as I have outlined above.

It was determined in the German Army that many aviators fell and in cases where they were not killed by impact with the earth that many of the planes were covered with blood.

On post mortem examination it was found that the lungs were torn or the aorta was ruptured which proved the great elevation of the arterial pressure which may occur in rapid descent.

When an aviator ascends, he is traveling slowly upward at not over 1,000 feet per minute and is going from a denser medium into a less dense atmosphere, due to less dense air tension.

The surface pressure is removed from the external surface of the body including the lung tissue.

Therefore the peripheral pressure is removed from the heart and the pulse beat is quickened, the heart is less filled with blood, which lowers the blood pressure. This has been proven by taking readings of the heart in actual flight.

In descent the man is coming down at the rate of a couple of hundred miles an hour and in the instance of the faster planes he touches the ground at the rate of one hundred miles per hour.

He is traveling from a rare air into a denser medium and the body is subjected to a sudden application of external pressure.

This causes a back pressure upon the heart which becomes filled fuller with blood; the beat becomes slower and more powerful which elevates the pressure to a great degree with the attendant rupture of the lung tissue or the aorta or some other vessel in the body, if the blood vessel is unable to take the additional strain placed upon it.

Thus we account for the sudden deaths as found by the German examinations.

We thus may have an apoplexy in the brain or in the labyrinth producing vertigo or paralysis of some vital area.

This was shown in my former paper in citing the case of aviators who fell to a certain distance in full control of their ship to succumb at a short distance from the earth's surface and

who crashed to death while already unconscious.

Many aviators who have done much high flying show distinct changes in the dimension of the heart, it being hypertrophied and exhibiting pathologic sounds or irregular contractions as evidenced by premature systolic sounds.

Many men during the war were found to grow stale.

Many of these were neurotic types while some of them showed distinct yellow streaks, while others were unfitted by too much drinking and social excesses.

Most of our fliers had had less than 300 hours in the air so that they were not unfitted by actual flying.

I showed in my tests that of the first 50 men examined that 26 per cent. were not able to qualify according to the vacuum test, while in the second series of 50 there was 33 per cent. which failed to come up to the standard test.

This just about tallies with the percentage of men in actual work who failed as aviators, and to me it showed that had they been selected by the vacuum test they might never have been accepted.

As aviation has come to be a fixed and routine business with a large number of men, and as it will be but a short while when we will have great transportation companies carrying thousands of persons through the air, it is of the utmost importance that we study the necessary qualifications of the flier and adopt some sort of laws by which we may standardize applicants for positions as aviators or employees in a real transport service.

It is a great responsibility to be a pilot when we realize that he cannot fail in his efficiency for even half a second or the ship he is sailing may crash to the earth killing all who are in his charge.

You have read of the new Italian airship which is equipped to carry one hundred passengers, and the day is here when this mode of travel will become commonplace. It is, therefore, our duty as otologists to do our part in making traveling as safe as possible in this new mode of locomotion.

30 North Michigan Boulevard.

ULCER CURE FOLLOWING GASTRIC AND DUODENAL PERFORATION*

KARL MEYER, M.D.

CHICAGO

The results following operation on the stomach and duodenum while showing an increased number of cures, due to a more intelligent selection of technical procedures, leave much to be desired if an accurate account is taken of the clinical symptoms following the various operations performed.

During the past seven years, I have had under observation and have operated on many cases of gastric and duodenal perforation. In this acute surgical crisis I have repaired the perforation as rapidly as possible without further operative procedure, that is, gastro-enterostomy. This rule, however, is not ironclad, for it is necessary in case a previous history of gastric stasis is obtained, and in case the repair is doubtful and constriction occurs, to supplement the closure with a gastroenterostomy.

It has interested me to know the after history of these cases, and to see if a follow-up might not be of some value in teaching us the type of operation to perform where perforation has not occurred. With this in mind, fifteen patients were studied. My observations included the clinical symptoms if any following operation, the gastric analysis, and the x-ray evidence of any pathology that might exist.

Clinical Notes. Thirteen of the patients interrogated stated that they were entirely free from stomach complaint, and felt better than they had for years. A questionnaire relative to their diet elicited the fact that they had not adhered to an ulcer management following operation. The two patients who still complained of gastric distress will be discussed separately. These findings bear out the statement of Deaver, Mayo, Clairmont, and others that spontaneous perforation of gastric and duodenal ulcer is in the great majority of cases followed by a clinical cure.

Gastric analysis did not indicate anything of specific import in the thirteen cases showing a clinical cure. The total and free acidity were well within the normal limit as described by Reh-fuss and Hawk. One of the two cases not show-

*Read before the 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

ing a clinical cure was also negative as to gastric chemism.

The x-ray findings were a surprise to me, for I had expected to be able to demonstrate a definite pathology. This did not prove to be the case, for fourteen of the fifteen cases proved to be negative. No defects could be demonstrated, peristalsis was noted as good, and the emptying time was normal.

The two patients not clinically relieved presented a different symptom complex. V. M., aged 50 years, was operated on November 17, 1916, for perforation of the duodenum. A good operative recovery was made, but no directions were given as to post-operative treatment. When first studied, he complained of pain, belching of gas and nausea. He showed the distinct periodicity and chronicity of ulcer. A gastric analysis was negative. The x-ray showed no defect and no six hour residue was present. The patient was placed on ulcer management, and at the present writing shows no return of symptoms.

The second case, T. F., was operated on May 29, 1919, for a perforation on the anterior surface of the stomach near the pylorus. Since operation the patient complains of pain coming on about two hours after eating. Nausea and vomiting are also prominent symptoms. States that he vomits more than he eats and that he has lost 30 lbs. in weight. Gastric analysis after Ewald meal shows 240 cc. returned with free acidity of 78, and total acidity of 96. Motor meal shows retention of food products. X-ray examination shows a large 6 hour residue. The stomach is very large, but no alteration of outline is revealed. There appeared to be a notch on the periphery of the first portion of the duodenum, on the lesser curvature, which the roentgenologist took to be an ulcer. At operation on November 13, 1919, I found marked peri-gastric adhesions, producing an almost complete occlusion of the pylorus for a distance of about $1\frac{1}{2}$ inches. No evidence of the former perforation could be demonstrated. A posterior gastroenterostomy was done, and the patient placed on ulcer management. At the present time, patient has gained 35 lbs. in weight, and is entirely free from gastric distress.

The study of these patients shows that a gastroenterostomy is not essential to the healing of perforated ulcer, and that the percentage of post-operative gastric symptoms is far lower than after operation for non-perforative ulcer. The work of Wilensky and Crohn, published in the June number of *American Journal of the Medical Sciences*, 1917, should be read by all, especially those who are prone to perform the anastomosis without a serious study of the post-operative results. In their discussion, they state, "It becomes evident that the impression now very

generally in existence that gastro-jejunostomy is an operation which in no way impairs the functional efficiency of the stomach is an erroneous one. The operation leaves this organ definitely impaired in a large percentage of the cases. The creation of a new opening in a situation not intended by nature disturbs the peristaltic tons of the stomach, the secretory function, and the nervous mechanism controlling both. In only a minority of the cases does the stomach return to an almost normal state of activity."

From the clinical evidence, made on the fifteen cases studied in this series, and reasoning by analogy, one can accept the observations of Bal-four that artificial perforation and excision by cautery presents a very logical procedure in the cure of gastric and duodenal ulcer.

Resection of the ulcer when a cure cannot be obtained under ulcer management has also proved to be of great benefit, but possesses added dangers to artificial perforation with cautery.

DISCUSSION

DR. R. W. McNEALY, Chicago: The question of doing primary gastro-enterostomies on these cases of perforation, I believe is cloudy in the minds of a great many surgeons because certain well-known men have advocated doing a primary gastro-enterostomy on practically all such cases. The pathology underlying an acute perforation has a great deal to do with whether or not a primary gastro-enterostomy should be done. In the type of acute perforation where you have the formation of an acute ulcer, such as I have seen quite recently, where the ulcer area has practically no infiltration, where the walls are practically normal, and where there are no adhesions to the surrounding organs, and where the perforation opening itself is quite considerable in size and where the entire peritoneum is flooded with material from the stomach, there I believe one would be in error to try to do a primary gastro-enterostomy and to subject the patient to an increased mortality which is bound to follow prolonging of the operation from thirty to forty minutes. These cases are very easily sutured, the walls can be inverted, and many times a purse-string suture can be put in. There is very little danger of occluding the pylorus and making such a stricture that nothing will go through. I believe in such a coil one is not justified in going any further than closing the perforation and getting out of the abdomen.

There is another group of so-called chronic perforations in which you have a long-continued history of gastric or duodenal ulcer and when you open the abdomen you find many adhesions about the duodenum and the duodenum either adherent to the liver or to the gall-bladder or to the omentum in the vicinity. When you examine the perforation you find

as a rule a very small perforation, one that has probably leaked a little; the edges are very much indurated and there your contamination is likely to be small in amount and the ulcer is not so likely to heal, as suggested by Dr. Meyer, with simple closure of the perforation. There I believe one is warranted in doing a primary gastro-enterostomy. The peritoneum has been accustomed to more or less contamination, that is, if there has been a slight leak. Stricture or occlusion of the pylorus is more likely to follow in these cases. If you do not do a primary gastro-enterostomy, you very likely will have to do it later on.

The recurrence of symptoms may come on ten or fifteen years after perforation. In a recent issue of the *Annals of Surgery* a number of men reported recurrence of symptoms as late as ten, thirteen and eighteen years after the original perforation. I feel there are cases where primary gastro-enterostomy is indicated but the great majority of acute perforations have enough mortality with simply going in, closing the perforation and getting out.

DR. EDWARD LOUIS HEINTZ, Chicago: I have been associated with Dr. Meyer on a number of these cases and I know the very high quality of work which he does and the care which he gives the follow-up management.

I recall a case we had a few weeks ago. The patient had gone the rounds of ulcer treatment. The roentgenogram showed an irregularity of the duodenal cap. There was evidence at the greater curvature which looked exactly like a gastro-enterostomy had been done, and it appeared as though the barium might be coming through. This was thought to be due to either a perforation or adhesions. We were unable to relieve the patient by medical treatment so Dr. Meyer operated on him. It was found that the trouble was due to adhesions and the result was very gratifying.

I know the follow-up treatment which he told you about and it is the follow-up treatment that I am interested in. There are three or four indications for surgery in gastric ulcer, one is perforation, another is uncontrollable hemorrhage, another is the formation of sufficient cicatricial tissue either at the cardia, at the pylorus, or across the middle of the stomach, giving an hour-glass effect so the food cannot go through, and the fourth is probably in the borderline cases where it may be beginning of malignancy and may be amenable to surgery.

The follow-up treatment is important for this reason: You do a gastro-enterostomy and you are very likely to have an ulcer in the bowel of junjunum. Why? Because you may have a peptic ulcer anywhere that free hydrochloric acid reaches. It does not make any difference where—it may be in the rectum. If you have free hydrochloric acid, food management is necessary. A method which provides for alkalinizing and keeping the stomach contents alkaline I believe is the preferable one. I enjoyed the paper very much.

TESTICLE TRANSPLANTATION. REPORT AND DEMONSTRATION OF A CASE*

CHARLES MORGAN McKENNA, M. D.,
CHICAGO

It is not my purpose in coming here this evening to give a dissertation on gland transplantation. This work is not new and much experimental work has been done. In looking over the literature we find that as far back as 1849 Bertholt was doing gland auto-transplantation on fowls. Herlitzka, Lode, Guthrie, Carrel, Voronoff, and others have carried out lower animal gland transplantation on lower animals. Dr. G. Frank Lydston of this city was the first to implant the human gland in toto for therapeutic purposes. His first cases were from the dead to the living. He also demonstrated the circulatory condition and the proliferation of the cells of Leydig in the transplanted gland and made the first exhaustive studies of the hormone effects of implanted sex gland. As Dr. Lydston's work is familiar to all of you, it is unnecessary for me to go into any discourse on this subject, hence I will confine my paper to a report of a case successfully operated on.

H. S., aged 26 years, reported at the dispensary of the College of Medicine of the University of Illinois in 1916 with the following history:

He was operated on for tuberculosis of the right testicle in 1909 by Dr. Priest of Kansas. At that time the testis and epididymis were removed. Two years later the same operation was performed on the left side.

When the patient came to the dispensary he was complaining of frequent urination and a little pain over the right side. Upon examination of a catheterized specimen of bladder urine many tubercle bacilli were found. Further examination of the catheterized specimens showed many tubercle bacilli present in the urine coming from the right side with perfectly normal urine from the left. The patient was sent to the hospital where the right kidney was removed. Subsequently the cystitis improved and finally after local treatments with argyrol it was completely cured. At the time of the operation the patient inquired as to what results could be secured with gland transplantation and he was assured that as soon as proper material could be procured the transplantation operation would be performed.

Following the operation for removal of the right kidney his general condition was that of a robust, fat, flabby individual. He immediately gained in the neighborhood of 40 pounds. He continued

*Read before Chicago Medical Society, November, 1920.

to do his daily work, but always complained of being weak and tired, with lack of vigor and limited endurance. He reported from time to time at the dispensary in the hope that a gland transplantation might be performed.

It was not until August 24, 1920, that proper material was secured. It was an undescended testicle which was not even in the internal inguinal ring, but high up in the abdomen and impossible to bring down owing to the presence of a pedicle three-quarters of an inch wide. It was removed during an operation for hernia and removal of the undescended testicle. The transplantation was performed at St. Joseph's Hospital on August 27, 1920. The technic was as follows:

The patient was given the same general preparation as for a double hernia operation. A general anesthetic was given and an incision about $2\frac{1}{2}$ inches long was made in the inguinal region fairly high up over the scrotum and external inguinal ring. This incision was purposely made because of the contraction of the scrotum and tunica vaginalis. No difficulty was experienced in finding the tunica vaginalis, although it was well up towards the external inguinal ring. The testicle to be implanted was split in half, one-half being put on the right side after a scarification had been carefully done. The greatest possible care was given to the asepsis during the entire operation. The vas, cord, and ilio-inguinal nerves were easily exposed. A suture was placed through the cord to the freshly implanted testicle. On the left side the remaining portion of the testicle was introduced, but on this side slices of the graft were placed on various portions of scarified tunica vaginalis. The cord and ilio-inguinal nerves could be easily brought down in proper relation to the newly implanted testicle. The tunica was closed in the ordinary way. The patient was returned to bed and kept under observation for ten days.

At the end of the first 24 hours a very marked red flush appeared on his face without an increase in pulse rate or temperature. During his entire stay in the hospital his temperature never varied over one degree. On the morning of the fourth day the patient noticed a marked difference in his condition; to use his own words, "his sexual desire had all returned," which was expressed in a natural way. This manifestation took place every night and sometimes in the afternoon. During the fifth day the patient suffered considerable pain and redness about the wound. Hot boric compresses were promptly applied to relieve the pain and hyperemia. The patient was discharged from the hospital on the twelfth day, the wound being completely healed. His general condition was much improved not only from a sex standpoint but also from a mental standpoint, his mental condition being much brighter.

The patient reported at my office ten days later and stated that he had had intercourse

once with a fair amount of satisfaction. Seven days later he reported that his desire was much increased and more normal. On the third report, ten days ago, he had lost from 10 to 15 pounds in weight and his general condition appeared very much improved. His color was that of a healthy, strong man and the superfluous fat and flabbiness had practically disappeared; his sex condition was entirely normal.

I report this case, gentlemen, for what it is worth to you. As I said before, I have nothing to say. Any one who desires to question the patient may do so.

March 29, 1921.

Between seven and eight months have already elapsed since this patient was operated on and very careful observations have been kept. It is for this reason that I am making this preliminary report for what it is worth to medical science. In other words, it is my opinion that the negative reports as well as the positive should be made in following up cases of this character.

Since doing the operation on this particular patient I have made a number of others but sufficient time has not elapsed to give any more data than that already given in the early report of this case.

This case becomes a very interesting one inasmuch as the following changes have taken place:

It will be remembered that this patient only shaved very rarely before his transplant. At the present time the patient shaves three and four times a week. The texture of his hair has become much stronger and heavier. His forearms, which were mostly devoid of hair before the operation, have now a very plentiful and vigorous growth. The soft flabbiness and surplus fat have also disappeared. His endurance for work has improved 50 per cent. At the present time he occupies a very responsible position and does his work with the ease of any ordinary person. His sexual power is the same as it was a month or six weeks after the operation. Or to express it in his words, he feels as strong sexually as he did between the ages of 17 and 21.

No apparent change has taken place objectively at the site of the operation. It will be remembered that the transplant was made well up towards the inguinal canal. This, of course, was done by virtue of the fact that the testicles were removed some ten years previous and the tunica

vaginalis had contracted itself well up into the inguinal canal.

It will be interesting to know just how long the patient will continue in his present condition. He has promised, however, to report at intervals and, being a man of some education, we may rely upon his word.

I hope to be able to make another report at some future time.

IMPROVEMENT OF MAN AND THE HIGHER ANIMALS

CASPER L. REDFIELD
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The old English common law forms the common law of the United States. When there is no statute bearing upon a particular point, the common law prevails. According to the English common law, a boy of fourteen may legally marry a girl of twelve. In Kentucky and Virginia, the statutes give fourteen and twelve as the marriageable ages for males and females, respectively. In fourteen other states there is no statute on the subject, and consequently the common law prevails.

In Kansas and Missouri the marriageable ages are 15 and 12, respectively. In New Hampshire they are 14 and 13. And in several other states they are very little higher.

And what happens under these conditions? Of the married men in the United States at the present time, about one hundred thousand of them are not old enough to vote. According to the census of 1910, over fifty thousand of them were nineteen or less years of age.

What are the results of early marriage? It will be conceded that early marriage has no bad effect upon those who marry. Also, if the parents have children when at the age of thirty-five, no ill effects will fall upon those children simply because the parents married at an extremely early age. The difference between marrying at the age of fifteen and at the age of twenty-five is that in the former case, children are produced who are the offspring of youthful and immature parents.

We do not keep human records as carefully as we do those of fancy stock, but we have a good many records for dates of births and deaths. It is a mere matter of detail to go into those records for the purpose of determining the effect of age of parents upon the quality of children. It is the object here to review some of the facts which bear directly and indirectly upon this point.

"The Ishmaels" is a name used to designate a group of degenerate families which are located in

and near Indianapolis, and which came mostly from Kentucky, Tennessee and North Carolina nearly a hundred years ago. In a statement made about thirty years ago, McCulloch catalogs 1,750 criminals, paupers and prostitutes among them, fifty-seven of whom were in the *sixth* generation from the original importation. McCulloch states that he personally knew three generations of beggars among them. His descriptions make the average parents, generation after generation, less than twenty years of age.

Another famous group of degenerates is known as "The Jukes." The story begins with a girl known as "Margaret, the mother of criminals." She was an eldest child, born when her parents were quite young, though their ages are not given. In 1784, while Margaret was in her teens, she had an illegitimate son. In turn, this illegitimate son became a father at the age of fifteen, and the son of this fifteen-year-old father became the founder of one of the worst branches of the Jukes family. Observe the *three successive generations* of unusually young parents, one of which was a male only fifteen years old when his son was born.

The records of the Jukes show that one girl became a mother at the age of twelve, and several others at thirteen and fourteen. One boy contracted syphilis at the age of thirteen. He was born only thirty-six years after the birth of his paternal grandfather.

These examples are of a kind which should cause us to investigate the effects of age of parents upon the quality of children. Standing by themselves, these examples are not "evidence" in the proper meaning of that term. It is possible to "explain" them by saying that the early reproduction was due to the degenerate character of the stock, and not the degeneracy due to early reproduction. Such pretended explanation is, of course, mere assertion, as may be seen by looking in other directions for evidence bearing on the point.

About seven hundred years ago England started the practice of picking out her ablest men and raising them to the peerage. The peerage was made a reward for unusual services to king or country, and it required much more than the average amount of brains to bring a man into that class. The sons of these selected men married the daughters of selected men, and the title was handed down through the eldest son of the eldest son in endless succession.

While the sons of peers did not marry and reproduce at the extremely early ages found among the Ishmaels and Jukes, still the eldest son of the eldest son means the most rapidly reproducing branches to be found in the descendants of these selected men. Selecting the highest grade of intellects to be found, and breeding them together, is the biologist's idea of the way to produce supermen, and we have in the British peerage the exact thing which the eugenists claim will improve the race. If that claim is good, and seven hundred years is a pretty long experiment, then the British hereditary peers

should be eugenically very much superior to any other men in the world.

There have been eminent men born in the peer-age, but in seven hundred years no such person has been produced who was the eldest son of the eldest son when that means less than an average of thirty years from birth of father to birth of child. As a general thing, hereditary peers are mediocre individuals, a fact which is good evidence that selection has nothing to do with improvement in mental qualities, and cannot maintain it after it is produced. Something other than selection is needed.

There have been many eminent men in this world, a considerable number of whom were illegitimate. Court records show that paternity is occasionally (or frequently) disputed, and among these eminent men there must have been some cases in which the putative father was not the real father. But even so, the great majority of records relating to these men must be accurate, and we can go over those records and determine what they are. We can also go over birth registrations and determine what is normal in human reproduction, or what is occurring at some particular time and place. We can then make comparisons which will tell us whether eminent men are produced in a normal or an abnormal manner. Such a comparison is shown in the accompanying table.

PERCENTAGES OF BIRTHS TO FATHERS OF DIFFERENT AGES

Age of Fathers	Eminent Men	New England 18th Century	Chicago 1913
24 and under.....	1.63	9.06	15.83
25 to 29.....	9.67	23.05	31.20
30 to 34.....	16.63	26.00	24.67
35 to 39.....	19.19	19.67	15.30
40 to 44.....	20.23	13.39	8.06
45 to 49.....	14.53	5.50	3.55
50 and over.....	18.02	3.33	1.39
	100.00	100.00	100.00

What occurred in New England during the 18th century may be considered as normal reproduction with British stock in particular and the white race in general. Comparing what is normal, with the combinations which resulted in producing superior men, it is seen that the older the father when the child is born, the greater is the probability that the child will become an eminent man. Comparing what is occurring in Chicago at the present time with what is normal, we can see what birth control is doing for the race. No matter how theoretically desirable birth control may be, in actual practice it is carrying the race toward the Jukes and the Ishmaels, and away from the production of superior men and women. No amount of idealism and theorizing can escape that concrete fact. As a demoralizing and race destroying agency, probably nothing equals birth control as it is applied at the present time.

Remembering that the different races and tribes of men freely interbreed and consequently are biologically close cousins, and that apes and other animals are somewhat more distant cousins, it will help some to make a table which will represent, approxi-

mately, the length of time elapsing from generation to generation in the male line.

APPROXIMATE AVERAGE AGE AT REPRODUCTION

Rabbits	1 year
Cattle	4 years
Horses	10 years
Apes	16 years
Digger Indians	21 years
Eskimos	23 years
Polynesians	26 years
Chinese	29 years
Chicago in 1913	31 years
New England in 18th Century	33 years
Fathers of 571 Eminent Men.....	40 years
Fathers of 10 Extraordinary Men.....	58 years

It will be worth the reader's while to study that table, and to take notice of the fact that it might have been very much extended by including within it many other tribes and races of men, and many other lower animals, with regard to which we have fairly reliable information. What is given, however, is sufficiently comprehensive to make it evident that the advance of most animals in the scale of evolution is quite accurately represented by the length of time elapsing from one generation to the next.

Due consideration of the table will make it evident that selection has nothing to do with bringing about the kind of improvements which distinguish the higher animals from the lower ones, and consequently nothing to do with the improvement of the human race. To have selection, a pair of parents must produce more than a pair of offspring, and the greater the number of offspring, the more the opportunity for selection to get in its deadly work. Also, the more frequently the generations follow each other, the more is the selection. Lengthening the time between generations cuts out selection and its opportunities for accomplishing anything. Looking at that table it is seen that we get improvement by a process which necessarily results in eliminating selection. If selection had anything to do with the matter, then rabbits should very quickly overtake and pass human beings.

What is it about the older parent which makes him the superior parent? It cannot be the mere matter of age itself because I have shown elsewhere that under certain definite conditions, the older an individual grows, the poorer he becomes as a parent. Mental power is the thing we most desire to improve in human beings, and we can get a line on this matter by considering the development of mental power in individuals, and some of the facts relative to the inheritance of such power.

Our psychologists have established a certain degree of mental development as representing normal-mindedness in a five-year-old child. They have a certain higher degree of mental development as representing normal-mindedness in a six-year-old; a still higher degree for a seven-year-old; and so on. By tests somewhat different from those employed by psychologists we can establish a standard for normal-mindedness in a twenty-year-old; a higher standard for a thirty-year-old; a still higher standard for a forty-year-old; and so on to some unknown point beyond sixty.

It is recognized that from feeble-minded parents

we get feeble-minded offspring; that from powerful-minded parents we get powerful-minded offspring; and that from intermediate parents we get intermediate offspring. In other words, mental power is an inherited thing, and the offspring inherits what characterizes the parent.

The average parent, male and female considered together, is about thirty years of age when the average child is produced. Hence, the standard parent is one who, at the time of reproducing, has a mental development which corresponds to normal-mindedness in a thirty-year-old. But a normal-minded persons at the age of twenty is ten years below what is normal-mindedness in a standard parent, and if such a normal person becomes a parent at the age of twenty he is, relatively, a feeble-minded parent. But the same normal person at forty is ten years above the standard parent, and if such a normal person becomes a parent at the age of forty he is, relatively, a powerful-minded parent. The same normal person may be a feeble-minded parent at one time in life, and a powerful-minded parent at another and later time.

Trotting power in horses is known to be an inherited thing. We get fast trotters only from trotting stock. We do not get them from "cold-blooded" animals, or from runners. Yet, as a matter of fact, our fast trotters trace back to running horses bred to "cold-blooded" farm mares. But we did not get these fast trotters from what the Mendelians call the F1 generation, or the F2 generation, or the F3 generation. We got them from later generations, and there is not a trace of Mendelianism in the process by which we got them. Also, there is not a trace of Darwinian selection in the process by which we got them, because, when we trace these fast trotters back to the runners and farm mares, we find that the improvement came only when selection was eliminated.

Trotting power is developed by exercising the horse at the trot, and drivers take advantage of that fact in preparing their animals for racing purposes. The records of training and racing show that under continual trotting exercise a horse will continue to gain in trotting power up to at least seventeen years of age. Conversely, a horse loses trotting power by idleness, the same as a sedentary man loses strength by lack of exercise.

We considered the standard human parent as one who had a mental development corresponding to normal-mindedness in a thirty-year-old. In the same way we can establish what is the standard trotting parent in horses. When we trace the pedigree of a fast trotter back to the time in horse history when there was no such thing in the world as a 2:30 trotter, we can determine what kind of animals constituted the parents, grandparents and great-grandparents of the improved trotter. When we do that and compare the animals in that pedi-

gree with our standard horse-parent, we find that improvement in trotting power comes in later generations only when earlier ones exceeded the standard parent by extra hard work at trotting.

We can put this matter in a little different form. Trotting power is inherited. Trotting power is developed by exercise, and the records show that such development continues as long as exercise continues. The thing which is acquired is the thing which is inherited, and scientific investigations directed to the point show that the inheritance of such acquisitions is the source of improvements. Also, that there is no other source.

Tables made from the records of trotters show that if a horse is continually exercised at the trot he continues to gain in trotting power year by year as he grows older, and that, if the exercise is continuous and fairly uniform, the amount of his acquired development is directly represented by his age. Tables giving the performances of cows which are regularly bred and regularly milked show that they gain in milk-producing power year by year as they grow older, and that the amount of this development which they acquire by exercise may be directly represented by their ages. We have previously seen that mental power continues to develop in man up to a late time in life, and that normally we may represent the amount of this development by the age of the individual. When we examine the various facts relating to this mental development in man, and compare them with what we find in horses and cows, and with what we find in a variety of other animals and in plants, it is clearly evident that this mental development in man as he grows older is due to mental exercise, and to nothing else.

The "higher" animals are not those with the longer legs. Primarily, they are those animals with the greater mental power, and secondarily, those with the greater physical power. Mental and physical powers are developed by exercising them, and the extent to which an exercised animal has developed his powers is represented by his age. From parents of large powers we get offspring of large powers, and from parents of small powers we get offspring of small powers. That is, the offspring inherits the kind of powers which exist in the parents, and a careful analysis of the facts shows that he inherits what existed in his parents at the time he was conceived, and not what existed at some earlier date or will exist at some time in the future.

With these facts in mind, turn back to that table which begins with rabbits and ends with extraordinary men. It should not be difficult to understand why the higher animals are those which reproduce at the higher ages. Also, it should not be difficult to see that it would be well to change some of our laws so as to prevent boys in knee pants marrying girls in short dresses.—*Western Medical Review*.
527 Monadnock Block.

VENEREAL WART CONVERTED INTO A CARCINOMA BY CAUTERIZATION

CHARLES MAC DONALD, M. D.
CHICAGO, ILLINOIS

Carcinoma of the penis has been frequently reported by C. Kaufman, Barney, Paget, Billroth and others. My object in reporting the following case is intended to show a new phase in the treatment and to emphasize a warning against overtreatment of venereal warts for the reason that it is liable to lead to serious consequences. Chemical irritation is just as liable to produce malignancy as any other irritant, and therefor in the treatment of such cases one must guard against too severe applications as is sometimes applied.

Mr. P., age 65 years, came to my office complaining of a few venereal warts on the penis. Because of his advanced age and there being no indications for interference I advised leaving them alone. He disregarded my advice. Went to another physician, the latter cauterized some of the warts at certain intervals.

Following the cauterization the following clinical picture was presented: A thin whitish discharge appeared in about two weeks. A slight inflammatory condition developed with a papillary appearing ring forming around the area. He complained of constant itching, smarting and of general discomfort especially during the act of urination.

Becoming dissatisfied with the second physician he returned to me for further advice. Taking into consideration his age, plus the history and appearance of the lesion my suspicion was aroused and I explained to him the probability of malignancy. He left me again for a two months' period, when he again returned. This time he had a typical cauliflower growth with glandular enlargement around the region. His general appearance had greatly changed in the interval. He was cachectic, had lost weight and was himself convinced that it was now time to do something radical. When I suggested amputation he again disregarded my advice and went to still another physician who gave him a series of x-ray treatments with the consequence that there was formed a rough open discharging wound, extremely offensive and very painful. He again sought my advice but in the interval between his last visit he had lost weight rapidly;

the total loss of weight by this time amounted to 40 pounds. This time he suggested amputation. Examination, however, showed clearly that metastasis had taken place to such an extent that operative procedure was not justified.

An important feature connected with the case is that the warts which were not cauterized (which were at the lower end of the penis) had not undergone malignant changes, showing quite conclusively that the cauterization was responsible for the carcinomatous development. Illinois General Hospital.

MR. DOOLEY ON PHYSICAL DIAGNOSIS

The medical men cannot fail to appreciate Mr. Dooley's delicious humor in describing his experience in undergoing a physical examination. He says:

"By that time I'm scared to death, an' I say a few prayers, whin he fixes a hose to me chest an' begins listenin'." "Anythin' going on inside?" says I. "'Tis ye'er heart," says he. "Glory be!" says I. "What's th' matther with that ol' ingin?" says I. "I cud tell ye," he says, "but I'll have to call in Dock Vinthricle, th' specyalist," he says, "I oughtn't be lookin' at ye'er heart at all," he says. "I niver larned below th' chin, an' I'd be fired be th' Union if they knew I was wurrukin' on th' heart," he says. So he sinds f'r Dock Vinthricle, an' th' dock climbs me chest an' listens, an' then he says: "They'se somethin' th' matther with his lungs, too," he says. "At times they're full iv air, an' again," he says, "they ain't," he says. "Sind f'r Bellows," he says. Bellows comes and pounds me as though I was a roof he was shinglin' an' sinds f'r Dock Laporattemy. Th' dock sticks his finger into me side. "What's that f'r?" says I. "That's McBurney's point," he says. "I don't see it," says I. "McBurney must have had a fine sinse iv humor." "Did it hurt?" says he. "Not," says I, "as much as though you'd used an awl," says I, "or a chisel," I says; "but," I says, "it didn't tickle." The end is: "They mark out their wurruk on me with a piece iv red chalk, an' if I get well, I look like a red carpet."

BOB INGERSOLL AS A FORECASTER

Robert G. Ingersoll was a philosopher as well as a great lawyer. In a Thanksgiving address in Chicago twenty years ago he said: "There was a time when it was the generally accepted idea that those that gave from the several professions monopolized all knowledge in their respective branches. If a person became ill he hunted a doctor; if in trouble he saw the lawyer; if he wanted real estate be called on the broker; if he sinned be went to the priest; if he was financially embarrassed he took counsel with a banker, etc. But now, everybody knows some law, medicine, finance, and a little about everything; hence, independence, progress and the professions have lost their dignity to a large extent.

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SEPTEMBER, 1921

Editorial

DOCTOR CONCENTRATE YOUR EFFORTS ON PRESIDENT HARDING. HE IS FOR THE SHEPPARD-TOWNER BILL. EFFORT EXPENDED ON INDIVIDUAL CONGRESSMEN IS WASTED.

In fighting the Sheppard-Towner Maternity Bill all energy should be directed to President Harding. The medical profession throughout the United States have heard from a sufficient number of Senators and Congressmen to convince us that effort expended on individual Congressmen is wasted. Work should be done at the head of the organization. Several Congressmen have answered their doctor constituents who protested against the passage of the Sheppard-Towner bill in substantially the same language as follows: I am an organization republican and await instructions. Referring to the Sheppard-Towner Bill I will say there are provisions in it which I am opposed to and I have not entirely settled in my own mind just what my attitude ought to be, so many questions are involved. There is a great deal of opposition to it and much

feeling about it. The President, however, is very strongly for the bill and his influence, of course, is very considerable.

WHO WERE THE ANN ARBOR SCIENTISTS?

SOME FAMOUS AMERICAN HOAXES BARNUM'S WHITE ELEPHANT

"The mention of white lions recalls the tale of Barnum's White Elephant. The real white elephant belonged to another showman, and the famous exhibitor ransacked the earth in vain for a second specimen of the same sort. Search failing to reward him, he used the bleach so dear—so unfortunately dear—to many ladies, upon the garden variety of elephant. The outcome of the ensuing discussion was that a learned body of scientists at Ann Arbor pronounced his peroxide beast to be the genuine white elephant." Munsey's Magazine, Vol. 29, p. 734, Aug., 1903.

Note: Judging from the number of medical white elephants that have come to light in the State of Michigan in the last year or two we cannot help but think that the original performers who helped Barnum swindle the American public a few decades ago are now attempting

through another species of white elephants to bamboozle the doctors of the nation.

DEFICIENT EDUCATION OF PHYSICIANS RESPECTING INVESTMENTS

A matter of serious importance to the medical profession, one rarely noticed by the editors of medical journals, is the *deficient education* of physicians respecting investments. It is a sad fact, which is known to all sellers of securities, that lawyers and physicians are "easy marks." The higher the standing of the professional man, the greater is the likelihood that he is a poor investor. This is due to engrossment in his professional studies, and a mistaken belief that he is competent to use his own judgment in selecting and comparing investments.

Banks and trust companies, in the larger cities, have officers who are designated to assist business men in selecting and passing on securities. When a professional man reaches the point that he knows the difference between a stock and a bond, he usually feels that he has reached the point where he has displayed some fitness for investments. That there are innumerable classes of bonds, and that strictly first lien bonds are the exception and not the rule, is a matter not as commonly known as it should be.

Advertisers of high-class investments find the journals, published in the interest of the professions, a much poorer media than trade journals going to persons in business lines. In fact, they are so poor that the use of these magazines for advertising purposes is the exception rather than the rule.

THE TIME IS COMING WHEN THE MEDICAL PROFESSION WILL BE OBLIGED TO THROW OUT ITS FALSE LEADERS

At the Boston session of the A. M. A. Dr. J. F. Rooney of New York presented before the House of Delegates the following resolution:

"RESOLVED, that the American Medical Association defines 'State Medicine' to be any method providing for the practice of medicine under the direction, subsidy or control of the State or National Government, excepting those functions having to do with preventive medicine and public health which do not involve the treatment of disease except that which is communicable." This resolution was referred to

the Reference Committee on legislation and Public Relations, and, as might be expected was given scant consideration as a direct result of the influence of Public Health officials. To quote a well known slogan "there's a reason." The rejection of this resolution was not because it did not hit the nail on the head and define State Medicine as it should be defined. However, the time is coming when the medical profession as a whole will be obliged to throw out its false leaders.—*Indiana State Medical Journal*, July 15, 1921.

MEDICAL PROFITEERS ASSAILED BY DEAN OF JOHNS HOPKINS MEDICAL SCHOOL.

DOCTORS LOSING RESPECT OF PATIENTS, AVERS WILLIAMS, HOPKINS HEAD.

Dr. J. Whitridge Williams, Dean of the School of Medicine of the Johns Hopkins University, declared recently that many of the physicians of today are profiteers who have lost the standing and the position of respect which the old fashioned practitioner had in his community.

The failing respect and the loss of caste is due, Dr. Williams declared, to the present-day tendency of doctors to demand in fees "all the traffic will bear." Dr. Williams was addressing the medical department of the Alumni Association of the University of Maryland, which held the opening session of a three-day reunion at the Medical and Chirurgical Faculty Building, on Cathedral street.

"A halt must be called upon the profiteering physicians who literally take all they can get out of their patients.

"The practice of medicine is no place for the money grubber, and we must return to the idealism of the former days," concluded the speaker.

Note: It seems to make a difference whose ox is being gored. The rank and file of the profession should live on starvation income but according to the latest interpretation of the code the all time institutional men should have no restriction placed upon their charges; only the sky is the limit. We have a beautiful example of this phase of the code in the Medical Department in the University of Michigan, an eleemosynary institution, where recently the head of the department of surgery in this institution admitted charging a fee of fifteen hundred dollars for an operation on a patient where under the terms of the charter and under all decent applications of the code of ethics as between the doctors of the State and

the institution the work should be done gratuitously.

THE PRACTITIONER IS IN BETTER POSITION TO RENDER PROPER SERVICE THAN THE SPECIALIST

Dr. F. H. McMechan, editor of the *Ohio State Medical Journal*, in a head note in commenting upon the article of Dr. Reuben Peterson in the article "Obstetrics and Gynecology from the Standpoint of the General Practitioner" in the August, 1921, number of the *Journal*, says:

"While the tendency toward specialism and group medicine is trying to meet certain necessities in the practice of medicine, at the same time there is a very decided reaction in favor of the all-around efficient general practitioner coming back into his own. In relation to obstetrics and gynecology, Dr. Peterson cannot but see that aside from calling counsel in obscure conditions and difficult operative procedures, the general practitioner can well handle the routine cases met with in obstetrical and gynecological work. In fact the practitioner is in a better position to render proper service than the specialist and if he will only live up to his full responsibilities and opportunities, there is no reason why the general practitioner shall not prevent or cure many of the conditions that now are the mainstay of the specialists' practice. The general practitioner is in a position in which he can bring his common sense into play. Carried away by no fads or foolishness, he can study the entire mechanism of his patients and get an accurate idea of the ailments with which their organisms are afflicted. Perhaps, best of all he can come into human touch with his patient, he can offer them that aid, not medicinal but spiritual, which is priceless to those who receive it.

TRI-STATE DISTRICT MEETING

The Tri-State District Medical Society extends a hearty invitation to the physicians of Illinois to attend its annual assembly which is to be held at Milwaukee, Wisconsin, November 14th, 15th, 16th and 17th. The following is a partial list of the members of the profession who have accepted places on the tentative program:

Dr. George Armstrong, Prof. of Surgery, Faculty, McGill University, Montreal, Quebec.

Dr. Edward William Archibald, Prof. of Clinical Surgery, Faculty of Medicine, McGill University, Montreal, Quebec.

Commander William Seaman Bainbridge, United States Navy, Medical Department, New York, N. Y.

Dr. Arthur Dean Bevan, Prof. of Surgery and Head of Surgical Department, Rush Medical College, Chicago, Illinois.

Dr. Hugh Cabot, Dean & Prof. of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

Dr. Henry A. Christian, Hersey Prof. of the Theory and Practice of Physics, Harvard University, School of Medicine, Boston, Mass.

Dr. John G. Clark, Prof. of Gynecology, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. Charles P. Emerson, Dean & Prof. of Medicine,

Indiana University, School of Medicine, Indianapolis, Ind.

Captain A. M. Fauntleroy, M. C., U. S. Navy, U. S. Naval Hospital, New York City.

Dr. Charles H. Frazier, Prof. of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. J. Claxton Gittings, Prof. of Pediatrics, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. William P. Graves, Prof. of Gynecology, Harvard University, School of Medicine, Boston, Mass.

Dr. Warfield T. Longcope, Bard Prof. of the Practice of Medicine, Columbia University, College of Physicians & Surgeons, New York, N. Y.

Dr. John P. Lord, Prof. of Orthopedic Surgery, University of Nebraska, School of Medicine, Omaha, Nebr.

Dr. Willis F. Manges, Prof. of Roentgenology, Jefferson Medical College, Philadelphia, Pa.

Dr. William J. Mayo, Mayo Clinic, Rochester, Minnesota.

Dr. Thomas McCrae, Prof. of Medicine, Jefferson Medical College, Philadelphia, Pa.

Dr. Reginald H. Sayre, Prof. of Orthopedic Surgery, University and Bellevue Hospital, Medical College New York, N. Y.

Dr. Alfred Stengel, Prof. of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Dr. J. Bentley Squier, Prof. of Urology, Columbia University, College of Physicians & Surgeons, New York, N. Y.

Dr. Frederick Tice, Prof. of Clinical Medicine, University of Illinois, College of Medicine, Chicago, Illinois.

Dr. Joseph A. Pettit, Portland, Oregon.

Prof. H. C. Jacobaeus, Stockholm, Sweden, will present a paper on "The Thoracoscopy and Its Practical Use," and will conduct a diagnostic clinic.

Dr. Henry Enos Tuley, Dean & Prof. of Pediatrics, University of Louisville, School of Medicine, Louisville, Ky.

Besides the contributions in form of essays and addresses, a large portion of the time will be devoted to the diagnostic clinic and an abundance of material is being arranged by the Milwaukee physicians for the clinics. The Association will be the guest of the Milwaukee County Medical Society which is heartily co-operating in making the meeting of great benefit to the physicians who will attend.

Doctors, make your arrangements now to attend the assembly, which offers four full days of post-graduate work. Bring your ladies with you. A fine program is being arranged for their entertainment. The program in full will appear in a later number of this JOURNAL.

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Dr. Don Deal, Springfield, Illinois.

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ONLY WOMAN MEMBER OF CONGRESS OPPOSES MATERNITY AID MEASURE

Expressing opposition to the Sheppard-Towner maternity bill, Miss Alice M. Robertson, Oklahoma, only woman member of the house, declared in a statement that "its salient feature is not tangible help of the kind the general public infers would be given, but the establishment of an autocratic, undefined, practically uncontrolled, yet federally authorized, center of propaganda."

"Statistics presented by the proponents of the maternity bill might find difficulty in passing the Ananias test," said Miss Robertson, adding that without complete statistics, which "are not to be had," the "sob stuff" claim which she said had been made by Mrs. Florence Kelley, general secretary of the National Consumers' League, that "680 babies die every day," absurd on the face of it and "quite in keeping with her comparison of congressmen to Herod."

"Were the pitiless light of real publicity turned upon the methods which have brought the maternity bill thus far toward enactment," Miss Robertson's statement continued, "its most ardent proponents in my belief would in all fairness be compelled to allow time for the as yet unheard majority of women who know nothing of the proposed legislation to learn the facts and to speak for themselves."

The bill which has been passed by the senate, is pending before the house commerce committee.

THE AMERICAN GYNECOLOGICAL SOCIETY OPPOSES THE SHEPPARD-TOWNER BILL

The American Gynecological Society, at its forty-sixth annual meeting held, June 2-4, 1921, took the following action regarding the Bill for the Protection of Mothers and Infants commonly known as the Sheppard-Towner Bill. This action of the society was taken, almost unanimously, after careful consideration of a report of its committee on maternal welfare acting jointly with a similar committee of the American Child Hygiene Association.

This society wishes definitely to state its position for the information of the medical profession and others who are interested in this legislative program.

The committee is in thorough accord with the ends which this bill seeks to attain, namely, the protection of the health of mothers and infants.

We indorse the coordination of all health activities under one head. We consider the protection of mothers and infants to be a health measure of paramount importance to the individual and the state.

We oppose in principle the control of health measures by non-medical individuals or boards.

We believe in the local control of health activities as distinguished from federal. We approve and indorse the idea of propaganda and investigation emanating from the federal government.

We do not indorse the Sheppard-Towner bill in its present form because it does not conform to the above principles and because it embodies the questionable plan of subsidizing state health activities.

MATERNITY AND CHILD WELFARE CASES CAN RECEIVE PROPER ATTENTION WITHOUT PAUPERIZING LEGISLATION

The Civic Federation of Chicago Bulletin No. 43, Legislative Report, July, 1921, has the following to say about maternity legislation:

MATERNITY FUND TAX DEFEATED.

S. B. 10 (Glackin) and S. B. 405 (Glackin), both designed to levy a special tax upon the public to give free medical and nursing care to any and all maternity cases, regardless of the financial or social condition of the beneficiary, were defeated with the greatest difficulty, first because of a wave of false sentiment stirred up for them (apparently in the absence of careful scrutiny) among some of the women's organizations, and second because of the argument that Congress soon would enact the so-called Sheppard-Towner bill granting Federal subsidies to States having similar legislation, and that Illinois ought to be in a position to "dip into the Federal pot." It should be stated that the interest of the local women's organizations seemed to wane as the political demand for the bills increased.

The character of, and arguments for, the bill suggested three lines of question: (a) Real need for such legislation as against the effect on morale of society of assumption by government of responsibilities heretofore rested upon the family head? (b) Vice of a special tax and extent of burdens to be assumed by taxpayers? (c) How far should the principle of Federal subsidies be carried into the governmental relations between the Federal and the State governments?

The significance of the first and second lines of inquiry is suggested by the statement of Henry J. Harris "Maternity Benefit Systems in Certain Foreign Countries," U. S. Department of Labor, Children's Bureau Publication, No. 57, p. 20, that in Australia (according to certain statistical sources quoted) "in the four calendar years, 1913 to 1916, there were 539,994 live births reported and 539,255 births for which maternity allowances were paid," and that as to costs in the same country (*ibid* p. 19), "When there were no extraordinary expenditures for war purposes, 3 per cent. of the government's expenditure was devoted to maternity allowance." Surely needy maternity and child-welfare cases can receive proper charitable attention, private or public, without such general pauperizing legislation.

The fact that local taxation (calculated to raise over \$1,000,000 in the county or \$650,000 in Chicago) was being urged upon Illinois for an object that was not demanded by any of the public or private child-welfare or charitable agencies, merely on the ground that Illinois should be able to *get a very little* share out of a prospective "pot" into which she would be required to *pay a great deal*, caused the Civic Federation, first, to oppose the pending Federal maternity

legislation on the ground that it tended to stimulate unnecessary local expenditure, and, second to inaugurate an investigation into the whole field of Federal "aids" to State and local governments.

"NUNCIABO MUNDO"

(I'll Tell the World)

DR. ALBERT C. PRENTICE

OF NEW YORK AND DRUG ADDICTION

Patrick Henry said a great many years ago, "we have but one lamp by which our feet are guided and that is the lamp of experience." The medical profession has found this a good rule to follow, when it comes to laying down clinical conclusions.

This tenet has helped to upbuild America and has kept the rockers going on the cradle of liberty. In late years the tenet may have developed into the colloquialism of "You've got to show me," but the spirit is there if the phraseology has changed! At least 100,000 physicians of repute in the United States today, to say nothing of brothers in therapy in every Continent of the world, insist upon being "shown" that there is any panacea for drug addiction, and they want more than one illustration on the point, too.

The medical fraternity in general has been aroused lately through the rather misdirected or misunderstood effort of a Dr. A. C. Prentice of New York. The doctor would seem unable to guide his sense of criticism and his art of philippics as well as he does his stethoscope or his scalpel. He has said some things that are hard for the professional brothers to swallow because it is putting a one-man opinion out as a general hypothesis.

The doctor as a member of the Committee on Narcotic Drugs, Council on Health and Public Instruction, American Medical Association discusses the problem of the Narcotic Drug Addiction in the June 4 number of the Journal of the American Medical Association. In that article Dr. Prentice attempts to assume that he is the last word in medical practice and in the treatment of drug addiction. Indeed, shall we not ask with the dramatist:

"How in the names of all the gods at once,
Upon what meat does this, our Caesar feed
That he has grown so great?"

When we read Dr. Prentice's article as it appeared in the A. M. A. Journal it reminded

us of the story of the Pharisee and the Publican.—Luke XVIII, 10-14.

With this parable in mind, we can see the very orthodox and (in his own opinion) immaculate pharisee striding in stately dignity up to the temple. His robe, perfect in material, cut and embellishments, is tightly held in the jeweled hands of the wearer, lest it should come in contact with something unclean, and, reaching the sanctuary, he stands proudly erect, expands his chest, throws back his head (casting side glances the meanwhile to ascertain if anyone is observing his highness), and proceeds to congratulate himself upon his perfect righteousness and his exalted standing in the eyes of the Almighty.

He knows that when he dies wisdom and virtue will die with him; and his chief concern is to get through with the negotiations with Heaven by which the calamity of his departure from earth shall be at least partially mitigated.

Apparently Dr. Prentice has come to regard himself as sort of embodied divine right. What he says is just and righteous altogether, and who-soever opposes him is a "conspirator." It might not be amiss for someone to inform him that this attitude gives the general public a feeling of profound weariness.

The doctor's attitude as expressed in the article mentioned, has irritated a great many people; possibly he did not mean to convey that nobody else knows anything about drug addiction. Probably he would not try to make the profession accept this hypothesis in view of his admittedly limited experience with addicts per se and first handedly. And, because of this it is indeed unfortunate that to the average reader, Dr. Prentice's article would seem to have based its conclusions upon excerpts from the writings of other men with no excerpts considered, except those with which Dr. Prentice's ideas were coincident.

Very flatly Dr. Prentice makes the assertion that a "widespread" conspiracy has arisen and is in active operation throughout the country to defeat the purpose of the Harrison law or to circumvent its requirements.

Why brand opposition to these measures with the high sounding name of "conspiracy?" Those who hold that addiction is a disease have just as good a right to work for their views as Dr.

Prentice has to work for his. If he has a right to propound the doctrine that addiction is not a disease, other people have a right to support their contention that it is. If he is within his rights in claiming that hospitalization is a panacea for "addiction," others are within their rights in supporting the findings of the New York Legislative Investigating Committee which demonstrated both the inadequacy, incompetency and failure of the institution or of hospital treatment of addicts; and showed the futility of statistics of "cure" and the very recent hearings on the New York legislative proposals which pointed emphatically to the conclusion that the situation today is, in the matter of available results of institutional treatment, at least not better than it was then.

Further, the good doctor pooh-poohs that "Narcotic addiction once established has the status of a disease." In fact he terms such a contention, "shallow pretense." He intimates in his article that certain reputable journals have been subsidized for propaganda purposes inimical to the Harrison law and names on this list the Illinois Medical Journal, American Medicine, the New York Times, the American Journal of Public Health, the New York Tribune and various others. This is all very interesting. Who is the Harrison Law? Prentice?

The situation becomes even more interesting in view of the present narcotic situation in New York City and the friendliness with which Dr. Prentice works with the police department there. It has been said by reputable authority that there is no defense for the physician who willfully violates the Harrison law, although we doubt very much if it has been possible for physicians in New York State to keep abreast of the various interpretations of the law. It is well known that there is an open question whether the present law can be enforced because of the unsoundness, and discriminating provisions of its rules and regulations, and its lack of effectiveness in controlling narcotic dispensation through the underworld peddler and the use of certain dangerous and vicious proprietaries.

Dr. Prentice is a philosopher of abstractions, who attempts to make the practical problem of addiction fit his theories about it. We plead in behalf of friend Prentice the excuse of his being

totally unfamiliar with the practical side of the problem.

While Dr. Prentice, claiming that all drugs should be withdrawn from addicts at once when their treatment is begun, analyzes about 8,000 cases of drug addiction that were registered and cared for during ten months by the New York Department of Health and admits that within three months after their discharge, of the 1,580 addicts who were given hospital treatment, it was found that a large proportion of them had already relapsed to their old habits and associates; he fails to say that the New York Department of Health found it necessary to supply the drugs of habit to about 75 per cent. of the addicts who came to the clinic. He does not make mention of the "rogue's gallery" methods, nor does he detail some of the items incidental to the hospitalization. He is not willing evidently to admit for a moment that there are as many different opinions as to the proper methods of handling drug addiction as there are to the proper artificial food for motherless infants. He overlooks that doctors in general have never agreed as to the best method of treatment for drug addiction or whether there is any uniform method available. No indeed, he, Prentice the absolute, knows what he is talking about whether anybody else does or not. "I am the great I am!" Hail, all Hail! to the new Moses, successor to Mr. Chas. B. Towns, come to deliver the doctors out of the wilderness of ignorance. Some of the physicians who have had first hand experience would be less self-assertive.

Among these last named should be mentioned Dr. G. E. Pettey, Dr. W. P. Butler, Dr. E. S. Bishop, Dr. E. H. Williams, Dr. C. E. Terry, Dr. M. W. Swords, Dr. C. A. Pearson, Dr. C. F. J. Laase and many, many others. It would appear that Dr. Prentice is taking upon his shoulders a burden that it is unfair should devolve there. However, all of his confrères do not feel his way. A howl of protest goes up from many quarters with a demand for a complete investigation of the present drug addiction problem and the insistence that not only shall the investigation be conducted by the Federal Government and every phase of the matter turned inside out, but that Dr. Prentice's own intimation should be followed. If any "working business interest" is sticking a finger in the pie, it should be routed out. "If

NOTE: There is no N. Y. state law.

any doctor, or body of doctors is affiliated with any commercial institution and is making money out of supplying drugs to addicts whether for the self-indulgence of the unfortunate individuals or for the benefit of the bank accounts of the physicians; whether the drug be sold as a drug or masked as a panacea, then the guilt should be discovered and fixed definitely upon its perpetrators. The new administration can place a fine feather in its cap by getting after this matter and cleaning it up."

We have studied the subject of drug addicts carefully as any authority of any medical or scientific qualification on addiction or narcotics. We do not see where he can possibly qualify as an authority on addiction or narcotics. We have been unable to find any experience or association or interest on his part in this subject other than the mere fact of his having been appointed to some "committees" in medical organizations. We believe this was during the time that Lambert was president of the American Medical Association.*

Moreover, there is so much in the utterances and writings of Prentice that shows his ignorance of the subject that he is disqualified out of his own mouth, over and over again. Not only does he reveal no personal understanding of the condition, but he displays an ignorance of its literature and record and easily available information which lays his utterances open to serious suspicion. This, combined with the character of some of his comments and expressions and the sort of activity which he displays in the matter, point very strongly to his real function in the situation.

You do not have to take the above comments on our personal authority. If you will consult the report of the Committee on Legislation of the New York State Medical Society, beginning on page 209 of the June, 1921, issue of the New York State Journal of Medicine, you will find in official voice from his own state society, public record of medical mistrust of the narcotic committees and of "ten men in the medical profession and a couple of lawyers" who have some-

how or other gotten into and mixed up in this addiction matter.

Nothing can be stronger than the indictment of these committees and ten men by official voice of their own organization. Until they have answered and cleared their skirts of the suspicion which attaches they have no standing or right or legitimate voice in narcotic matters as representatives of medical and scientific men, supposed to protect their rights and further their scientific interests.

A man, any of whose association or committees with which he is connected can be so openly and definitely arraigned by official action of his own profession, is certainly in no position to criticize other people or to express any personal opinions whatsoever. Under more normal circumstances than exist at present, he would probably be called up to show cause as to why he should not be expelled from medical organizations. There certainly seems to be ample ground for institution of such action based upon the report, even if there were nothing else available. His activities have, so far as we can find out, been practically confined to securing or promulgating legislative administrative and other interpretations of narcotic law, along the lines of the Cotillo Bill attempt, also referred to in the legislative committee report in discussion and as having been attempted for the past seven or eight years.

The attempts referred to are apparently those with which Mr. Charles B. Towns has been associated, and the Cotillo bill was the blood brother or lineal descendant of those early efforts of Dr. Lambert's lay-associate in the so-called Towns-Lambert treatment.

The activities of Prentice and his associates have been so persistent and partisan, and of such a character as to lay them open to the charge that they were possibly functioning for the purpose of putting over this sort of stuff against the medical profession and medical study and progress, rather than for the purpose of any legitimate and real study of and attempt to relieve the narcotic drug situation. We say this because of the present attempted misinterpretations of the Harrison law, because the same thing is happening in the Federal law that happened in the New York State law—the original intents of the law are being reversed by attempted inter-

*This is the same Lambert who tried to put over compulsory health insurance on the medical profession and the same Lambert who is associated with Mr. Towns in exploiting the Towns-Lambert drug and booze cure. Prentice's appointment from this source should sufficiently identify him.

pretations. Namely, effort is being made to give to the Harrison Law the effect of the Cotillo and Fearon-Smith Bills, so that however actually illegal some interpretations may be, the effect is attempted to construe and interpret the Federal law to prohibit "ambulatory treatment." That is one of the reasons that New York is having such an increase in peddling and smuggling today. And this attempted construction and interpretation in accordance with the Fearon-Smith and Cotillo Bills idea seems to be one of the things that Prentice and his associates are urging and working for, in the elimination of the physicians and prohibition of "ambulatory treatment," as they call it.

This feature is of the greatest importance as will be realized before long by medical men. If it succeeds, it will make the Harrison Law really the same as the Cotillo and Fearon-Smith Bills, and has the same group of people behind the efforts as is shown in the New York State Society Legislative Committee report.

This attempt is a very sinister thing. In reality its perpetrators are trying to influence and to bring about in the Federal decisions and interpretations and rules and regulations, etc., those very prohibitions that they failed to have enacted in the law of New York State. Doctors should not disregard the warnings of the New York State Society's Legislative Committee report. It contains the meat of the whole situation and its exposure of the crookedness of the workings.

There is a tremendous mass of testimony and record, etc., that has been piling up that will have to be applied some day when the fundamental issues finally break for consideration and settlement through the "smoke screen" of false issues and of "formulizations," etc., that have been so emphasized in the recent past.

Some of the activities and propaganda, open and by inference and inuendo, coming from the associates of Prentice in this obvious effort, have been largely contributory if not direct causative factors in the creation of the present narcotic drug situation in the fostering of criminal and illicit drug traffic, in the underworld—smuggling and peddling and also in the suppression of medical and scientific attention and study and education so much needed for the real solution. It is a queer situation when the narcotic commit-

tees of medical organizations are working along lines of announcement and recommendation which have been repeatedly shown to be of the greatest benefit to the criminal underworld and to the charlatan and shyster. There is ample record to this effect which seems to have been ignored by Prentice and his associates and whatever forces have been influencing him or directing him. * * * What were Prentice and his associates selected to do? To put over such stuff as Towns and others used to try to, and which were discredited in the Whitney Legislative Committee investigation and elsewhere, or to really try to make some sort of a real and fair and scientific study of the narcotic situation and condition?

We are reliably informed that at a conference on this subject June 29, at the New York City Department of Health, at which Mr. Featherston, counsel for the Department presided, there was considered a report of a special committee. At that time Judge Cornelius F. Collins of the Court of Sessions—one of the best qualified authorities in this country on the legal and sociological matters of narcotics and addiction—and Dr. Prentice had a tilt; Prentice challenging Collins' statements with regard to lack of institutional successes in New York City and Collins challenging Prentice's disinterestedness. One of the members present at the meeting called the attention of the conference to the fact that the Governor of the State of New York cut out the appropriation of the Narcotic commission and the legislature finished the job by abolishing the commission and that the profession could not consistently tolerate the New York County Medical Society using the health commissioner of New York as a catpaw, to write in as a City Ordinance, through the Health Department code, the provisions of the Smith-Fearon bill which was antagonized by the self-respecting doctors of the state and repudiated by the Governor, who played safe by signing the Lord Bill No. 1 which abolished the commission and left the doctors of New York free to prescribe under the Harrison Act. * * * That this attempt which embraced the prohibition of "Ambulatory treatment" would meet with rebellion from the rank and file, and that our informant, Dr. O'Reilly, would do his best to help make such a coercive measure inoperative. The committee had left out the prohibition and refused to incorporate

it at the request of friend Prentice which, in the opinion of some present, would only benefit the peddler and those opening up a Sanitarium for drug addicts and accepting comfortable fees for the administration of what the Preliminary Report of the N. Y. State Legislative Investigation Committee refers to as "unsound nostrums". or for affording creature comforts for people who could comfortably afford to pay the price to avert the discomfort of being committed to a public institution and stigmatized and subjected to extortion under a non-ambulatory treatment provision in a state law or city ordinance. * * * The Harrison Law in nowise prohibits ambulatory treatment—though Prentices' attempted interpretations of it try to make it appear to do so—for the reason that such prohibition would take it out of the class of a "revenue measure" and would work its defeat. We think the status of the subject is pretty well established now in so far as the New York City Department of Health is concerned. We do not believe that serious minded medical citizens take Dr. Prentice or his sub-committee of the council on Public Health and Instruction of the A. M. A., any more seriously than they do Ex-Deputy Narcotic Commissioner Sara Graham Mulhall. This Mulhall person, be it understood, informed Dr. John J. A. O'Reilly of Brooklyn, N. Y., on Christmas eve, 1917, at the home of a New York society woman that she (i. e., Miss Mulhall) was in this country as the representative of Lord Northcliffe's Normyl Association which had brought the right to the "Normyl" cure for drug addiction. * * * "This is one of the 'cures' which is being exploited in the Metropolitan district embracing New York City, and of which Metropolitan district this same Mulhall person had charge in her capacity as deputy narcotic commissioner. There is a devil of a lot of humanitarianism in this narcotic problem solution by these "experts!" Yes(?) We believe every blessed medical society in this country should petition congress to make this narcotic problem the subject of an early and thorough investigation.

In January, 1918, the Medical Society of the County of New York received a report and statement from Dr. John P. Davin as a member of the special committee appointed by the society in January, 1917, to investigate and report upon narcotic drug conditions. Dr. Frank Van Fleet

was chairman of this committee and Dr. Davin's special report supplemented the committee report, and now, after three years' time, we find what is now happening is what was pointed out in that report as what could happen.

In his supplementary report Dr. Davin said, "As practically the only member appointed to this special committee of the County Medical Society who has taken particular interest in or who has had an active part in the consideration of narcotic matters, I feel justified in bringing before the body of this society these matters supplementing and criticizing the report of the special committee to which I was appointed." It must be noted that Dr. Davin did not approve the report of the committee. In his protest he added, "The events of the past year (i. e., 1917), climaxed by the revelations of the Whitney Joint Legislative Committee hearings permit medical men and medical organizations no further ignoring of recognition of the importance of the narcotic drug addiction problem and no further evasion of acceptance of responsibility in its development to its present status. We cannot any longer plead that this is not a medical matter and pass the blame to legislators and administrators. We are on trial for our past apathy and for our present ignorance and for allowing the existence of certain institutions and pernicious activities which we should have long ago investigated and called to account. That honest men are prosecuted and persecuted unfairly to their detriment and to the detriment of their patients, is not to be entirely blamed to the laws, but in great measure to the medical organizations that permitted a layman to dictate these laws and that permitted ignorant officials, police and otherwise to administer those laws as they pleased without hindrance nor remonstrance from us and without scientific information to guide them in their handling of their work."

Dr. George E. Petty of Memphis in his testimony before the Whitney Joint Legislative Committee in City Hall, New York City, hit out strongly against "dope cures and legislation." Dr. Petty is held to be one of the narcotic authorities in the profession. With Dr. Ernest Bishop, he has pursued successful clinical study and analysis of addiction.

Dr. Charles F. Stokes, former head of "Warwick Farms," and Mr. Charles B. Towns and his

sanitarium at 293 Central Park West, indorsed by Dr. Alexander B. Lambert, winced under Dr. Petty's testimony. At that time Dr. Petty said "any man who says he has a *special cure for addiction is either very ignorant or a shyster*. All of the cures and treatments that have been advertised or propagandized are simply one or more of the many remedies useful in handling addiction cases. That seems to be true of former Surgeon-General Charles F. Stokes' treatment and has been true of *Mr. Charles B. Towns' cure*. Mr. Towns' success in business depends upon his use of the name of Dr. Alexander B. Lambert. * * * There is nothing new in the use of these remedies. * * * The publicity and advertising of such things, especially with the advertising and publicity power of such names as Drs. Lambert, Cabot and Stokes behind them are the most harmful influence in drug addiction."

"They keep medical men and others from trying to learn anything about conditions. They are really the exploitation of names and titles of men, and not the discussion of decent clinical medical work and study at all. There is no question now that the disease is a blood matter. Dr. Ernest Bishop announced this hypothesis some years ago and subsequent work seems to have proven it. Many of the writers of real authority have adopted it."

Dr. Petty's and other testimony at the time caused Senator George H. Whitney of New York to declare that an investigation would be begun at once to determine whether men high in the medical profession *have received monetary consideration for use of their names in endorsement and advertisement of "cures"* and whether worthless "cures" have been foisted on the State by these men for advertising purposes.

The Whitney New York State legislative investigation committee shows an enormous widespread use of narcotic drugs. Other findings of this committee include the existence of a widespread misunderstanding; a habit; a vice; a depravity; *undeserved exploitation of the suffering and of the needs of the afflicted individual by the illicit, illegal, underworld peddler and also by institutions, widely advertised, purporting to cure the condition*. Also a widespread misunderstanding, or rather, an absence of all understanding of the state of mind, body and soul, hampering a drug habitue; also that based upon the theory of

"a habit, a vice or a depravity," there are heaped upon these sufferers far too much humiliation and shame, disgrace, and tortures undeserved. It has shown conclusively that this state of narcotic drug addiction is one of the most distressive of the chronic physical ailments and diseases.

Regarding the attitude of the ILLINOIS MEDICAL JOURNAL, the officers of the Society have no apologies to offer; neither its officers nor the organized profession of the State have in any way been subsidized, nor have they entered into any "conspiracy"; we have no mercenary motives in the matter, but we are much interested in the humanitarian proper solution of the addiction problem.

We have for a long period of time appreciated that the problem of addiction as applied to New York City is a serious one. We have not approved the methods pursued in handling the subject and have indicated a desire to have the problem of drug addiction in that city relieved of the unfavorable stigma or suspicion left after several legislative investigations. We are sorry to have to admit that the methods pursued in handling addiction in that city have left a stench in the nostrils of the medical profession and with a majority of the lay people from coast to coast who have given the subject an impartial study and investigation. This impression of lack of confidence in the way the problem has been handled should be corrected at the earliest possible moment and this can be most quickly brought about by an impartial congressional investigation of the whole subject.

The doctors of Illinois have no axes to grind and would like to have a Congressional investigation started immediately. Our State Society has gone farther than any medical society organization in attempting to solve the drug addiction problem as is evident by the following resolution which was adopted by the Society at the annual meeting of the Society in June, 1920:

WHEREAS, This matter of drug addiction is of great importance to the medical profession, to those suffering from the disease of addiction, and to the public; and,

WHEREAS, It has been at all times very evident to those who have watched operations of a certain coterie of New York Doctors that the theory Dr. Bishop propounded would make enemies. That he was bound to tread on a number

of mercenary corns. In this connection we would like to ask why he has been badgered in season and out of season by threats from high places to get him if he persisted in flouting his views that drug addiction is a disease. That is generally known by many, physicians high up in their profession in and about New York are financially interested in a stylish Sanitaria which exists to treat "dope fiends" and extract enormous fees for fake ministrations and pretended cures. Perhaps an unbiased Congressional investigation of this institution will show the reason for Dr. Bishop's arrest.

WHEREAS, If anybody had any doubt beforehand as to the motives which underlie the arrest of Dr. Bishop they should certainly be convinced after reading the report of the testimony of the hearing of the Cotillo Bill in Albany, New York, April 15, 1920. At this hearing judges from New York, the District Attorney from the Bronx and other prominent laymen brought out insinuations against a coterie of physicians interested in a certain stylish "Dope Fiend Sanitarium," which to say the least was far from complimentary and which certainly left a very bad impression on the audience and the newspaper men present.

The outcome of the Cotillo hearing has left such an unfavorable impression throughout the country that it calls for a Congressional investigation of Opium Addiction and its proper control. The unfavorable impression left at the hearing of the Cotillo Bill was so confirmatory that Senator Cotillo, sponsor of the Bill, at once withdrew his support and refused to have anything to do with it; therefore be it

Resolved, That the House of Delegates of the Illinois State Medical Society go on record as recommending that a Congressional investigation of the subject of addiction be instituted at the earliest possible moment and that it be conducted vigorously by a committee of unbiased men in order that we may determine the rights of medical men under the present anti-Narcotic Law; be it further

Resolved, That a copy of these resolutions be sent to the Department of Internal Revenue, Washington, D. C., and that a copy be sent to each of our Senators and Congressmen.

The New York State Journal of Medicine in its issue of June, 1921, carries a lengthy report

from the committee on legislation for which the personnel was Dr. James F. Rooney, Chairman; Dr. James N. Vanderveer and Dr. Henry S. Stark.

This committee recommended that a legislative bureau be established permanently at Albany as its opening statement, and further as Section 5, that a committee be appointed by the House of Delegates for the purpose of prosecuting a real state-wide investigation—not the closed chamber, five hour, stereotyped, dictated sort—on the subject of narcotic addiction disease and that their report embody suggested changes in the present law, both Federal and State that they deem necessary for (a) proper medical care and (b) police regulation. Furthermore that this committee meet with such other bodies, magisterial, charitable, health and education. in the hope that this most important question may be clarified and if possible, an unanimity of opinion arrived at which will have imperative effect upon legislatures, both national and state.

In the report the committee refers lengthily to the now notorious Cotillo Bill that had been in the legislature for eight years, had been withdrawn and was resuscitated this year; remarks that the measures relative to the Narcotic Drug question were:

- (a) The first Lord bill abolishing the department of Narcotic Drug control and all State Narcotic laws.
- (b) The second Lord bill re-enacting the main provisions of the old Whitney law without provision for any bureau to make rules and regulations.
- (c) The second Smith bill, practically the same as the Cotillo bill of last year which prohibits the prescribing of any narcotic drug to patients suffering from addiction disease, and permitting only personal administration of the drug by the physician, thus practically compels the institutionalizing of all persons afflicted with addiction disease or the driving of them to the underworld for their supply of drugs. It requires that practically all addicts shall be committed to state, county or municipal hospitals or to private sanitariums or hospitals that have been licensed ad hoc by the state department of health.

Further the report states—and it might be well

for Dr. Prentice to read it thoroughly—"that the majority of state, municipal and county hospitals practically refuse to accept for treatment cases of drug addiction * * * even if they did, they could not accommodate one-tenth of the number of addicts in addition to their normal population * * * then either the addict must be committed to private sanitariums with this increased municipal tax, or the addict must get his drug from the underworld. * * * *"Where the scheme is not horrible and inhumane, it is ridiculous and at the same time sinister.* The bill is not a local one. A studied attempt is being made to effect it into a law in many states and *an earnest effort is being prosecuted to have the regulations promulgated by the Federal Bureau having charge of the Federal Harrison Act to give that Act the same force as this bill would have if it became a law.* * * *

* * * We should consider seriously the menace involved to the public health, the public weal and the profession and evidenced by the continuous and persistent efforts of lay groups, highly organized minorities in association with small but influential groups of physicians. * * * Regulations as to the use of narcotic drugs and alcohol are merely the beginning of an attempt to completely control therapeutic methods. *The various committees that have been appointed by national and state bodies to investigate these subjects apparently have had as their foremost requirement for membership thereon the proof of lack of experience with the subject to be considered by them and their reports have always been entirely standardized and apparently written ad hoc by an interested group comprising not more than ten men in the medical profession and a couple of lawyers. Their investigations have not been unbiased; their findings have not been judicial and their reports have largely been ex parte formularizations.* But most important of all is it that the medical profession clear itself of all the groups and cliques who are striving not mainly for the benefit of the public and the profession, but for other and ulterior motives.

A word to the wise—(and that peculiar phrase) "Ten medical men and a couple of lawyers * * * "

Boy, page Dr. Prentice!

TEN MEDICAL MEN AND A COUPLE OF LAWYERS

That certain New York physicians are working hand in hand with a small group of laymen to secure complete control of the medical profession in that State was charged recently at the annual meeting of the House of Delegates of the medical society of New York State. The end in view according to Dr. J. F. Rooney now President of The New York State Medical Society and at the time chairman of the Society's committee on legislation is the ultimate socialization of the practice of medicine.

The medical profession should begin to consider seriously the menace involved to the public health, the public weal and the profession as evidenced by the continuous and persistent efforts of lay groups, highly organized minorities, in association with small but influential cliques of physicians," said Dr. Rooney. "The end is to secure eventually complete control of the medical profession and to ultimately socialize it. The same groups that were interested in forwarding the scheme for compulsory health insurance are now looking toward state medicine, the entering wedge of which is the Health Center plan."

Dr. Rooney charged that the attempts in the last legislature to control the use of narcotic drugs and alcohol "are merely the beginning of an attempt to completely control therapeutic methods." He continued:

"The various committees that have been appointed to 'investigate' these subjects have apparently had as their foremost requirement the proof of lack of experience with the subject to be considered and their reports have apparently always been standardized and apparently written by a group comprising not more than 10 men in the medical profession and a couple of lawyers. Their investigations have not been unbiased; their findings have not been judicial."

SCORES COLLEAGUES

Dr. Rooney scored his colleagues for their indifference to the problems facing them, contrasting it with the legislative activity of the other healing professions.

"Various cults are cropping up each year which are highly financed and have a well-paid lobby and a legislative influence that is entirely disproportionate to the number of their adherents. Through the immense propaganda of these cults the lay public in the last 20 years has been subtly influenced against the profession of medicine—the so-called 'Doctors Trust.' Physicians do not even take the trouble to deny these allegations; much less do they wish to educate the public to a proper appreciation of what medical science and art is."

The medical profession should have more of its members in the legislature, according to Dr. Rooney, who also stated that there is no real unity in the profession. He scored the failure to properly prosecute

Note: This article was to appear in the August number; it was withheld to make room for the important talk of the President of the State Society against the Sheppard-Towner Maternity Bill before the Committee on Inter-State and Foreign Commerce House of Representatives, Washington, D. C.

offenses against the Public Health Law.

Dr. Rooney denounced the second Smith Law for the regulation of narcotics as bound to drive drug addicts into hospitals or to the illicit vendors of drugs. He charged that it was part of a nation-wide attempt to limit physicians in the prescription of drugs.

CRITICISES NEW YORK SOCIETY

Both Dr. Rooney and Dr. J. Richard Kevin of 252 Gates avenue, president of the State society, referred to the opposition encountered from county societies, Dr. Rooney mentioning the New York County Medical Society specifically. He intimated that the New York society is at the bottom of the attempts to control the profession.

On the recommendation of the committee on legislation the delegates voted to establish a permanent legislative bureau at Albany and to organize a health education campaign to create a public demand for proper health laws and their enforcement. It was also voted to appoint a committee to investigate the question of drug addiction.

MR. VOLSTEAD HEARS SOMETHING

In his baccalaureate sermon addressed to the graduating classes of Harvard University on Sunday of this week, President Lowell insisted on clear thinking as the crying need of the day. To meet the urgent problems of the day, he said, we need not more organization or more machinery, but more personal thought, clear, far reaching, profound, and widespread as possible, for "in the multitude of the wise is the welfare of the world." It is a great pity that these words could not have been addressed to and taken to heart by the author of the so-called Volstead act, for he sadly lacks clear thinking. Not long ago he was quoted in the newspapers as saying that the medical profession was entirely satisfied with his restrictions on their use of alcohol, for only one physician had appeared before the congressional committee protesting against the provision of the proposed new Volstead law. The medical profession simply, as is so often the case with it until too late, had not yet waked up. It is waking up now and Dr. Davin of New York, who attacked the fanatics of the committee single-handed, is probably beginning to feel less lonesome. Individual physicians do not yet appear to have overcome their shrinking modesty sufficiently to utter public protests, the only ones coming to our notice being eight New York physicians who wrote a letter to the *Association Journal* calling attention to the iniquities of the Volstead act, but the American Therapeutic Society at its annual meeting in Washington protested vigorously against the intolerable restrictions on medical practice imposed by this law, and since then a great many local and county societies have passed resolutions of the same tenor.

An attempt was made to get the House of Delegates at the meeting of the American Medical Association to repeat its comedy of four years ago in declaring that there was no scientific basis for the therapeutic use of alcohol. More wisdom prevailed at

this meeting, however, than at that of 1917, and the declaration was not reaffirmed but the question was referred to the Committee on Scientific Research, where it properly belongs and where it will rest for a year. The Medical Record has voiced its protest against this and other outrageous attempts by ignorant laymen to regulate medical practice, but the medical press in general, with a few exceptions, has been shy of expressing disapproval of this oppressive law. However, the American Medical Editors' Association has now come out with a set of preambles and resolutions protesting against "further undue regulation of therapeutic procedure" and calling for a revision of the existing statutes. The resolutions, we regret to say, are wordy and weak, and the protest should be against not only "further" but also present regulation of therapeutic procedure, and since every such regulation by lay enactment is "undue," it is unfortunate that this qualification should have been inserted. However, it is well that the Association has put itself on record, even if feebly, and it is probable the resolutions were intended to be more forceful than they are.

But it is not only medical men and their patients who suffer from this meddlesomeness of the W. C. T. U. and its congressional subservients; chemists and manufacturers are also beginning to wake up and to find that the Volstead act is destined to work irreparable injury to the chemical and other industries of the country if it is allowed to stand in its present or proposed shape.

We trust Mr. Volstead has learned by this time that the medical profession is not unanimously in favor of submitting to his prejudices in regard to the practice of therapeutics, although that would probably not trouble him, for "doctors" don't count politically, at least most politicians still think so; but now that the chemical and manufacturing industries are aroused we have some hope of reason penetrating to the committee room. If we are not to be allowed to help our patients by giving them alcohol when they need it, we shall at least be thankful if the drug manufacturers are permitted to get enough grain alcohol for use in making tinctures, fluid extracts, and other pharmaceutical preparations. Perhaps some day when the author of this outrageous bill rests in a teetotaler's grave the country will wake to the fact that temperance can be promoted without killing the sick or ruining our manufactures. —*Medical Record*.

STANDARDIZING THE DOCTOR

CARE SHOULD BE TAKEN THAT SOMETHING WORSE DOES NOT FOLLOW

The *Detroit Journal*, August 3, 1921, has the following kind words to say for the medical profession:

The board of trustees of Johns Hopkins hospital has laid it down that:

"The maximum fee any surgeon ought to charge for an operation, no matter how wealthy the patient may be, is \$1,000. The maximum charge that any physician ought to make for attending patients in a hospital is \$35 a week."

Doctors' fees, like a great many other things, have betrayed a tendency in recent years to sprout wings and soar skyward. Where a few seasons since people who had undergone hospital experiences were wont to talk about operations, not infrequently in disturbing anatomical detail, they now go over and over the cost of the operations. The reaction is in this pronouncement of the Johns Hopkins trustees.

The subject of limiting medical fees, however, is very boggy ground. It causes one to remember that despairing Frenchman who, after long observation, came to the conclusion that mankind, when it threw away an institution, adopted another that was worse.

Now it has been an institutional custom among doctors to charge well-to-do patients high prices so that poor patients could be charged small prices or nothing at all. Some doctors, it is true, obey only the first part of that rule. But so many obey it in entirety that their profession can be credited with a sort of Robin Hood humanitarianism of sticking the rich to give to the impoverished. An attempt to fix fees at one end of the scale might easily lead to fixing fees all along the line. In that case, the rich patients will have to pay less than they customarily do today and the poor will have to pay more. Further, the official interference with fees on the part of a great hospital might be a step toward official action by government—the introduction of state medicine which for every good point has a thousand bad ones.

Doctors are not supermen. They have their ambitions to be wealthy, their selfishnesses, the same as other folk. Yet their profession, more than any other, has a workable code of unselfishness. The trouble about checking the grasping habits of certain physicians is that it might cause the finer impulses to fade and wither and become nothing worth considering. Remember our Frenchman. Before compelling one institution to die the death, even though the institution is seemingly abused, care should be taken to see that something worse does not follow.

WHEN SURGEONS BELONG TO LABOR UNIONS

When the White Collar union is fully organized, union doctors will leave operations unfinished should the whistle blow for quitting time before the victim has been sewed up; the Local or Throat Doctors will not be allowed to prescribe for any ailment above or below their territory and they will have to be accompanied by Mouth Doctors, who will be the only ones allowed to open and close the patient's mouth. Union undertakers will not be allowed to bury a non-union man; union grave-diggers will not dig his grave, and no union horse will pull his nonunion remains out there.

Union lawyers will refuse to try cases before non-union judges. Prisoners will refuse to be hanged by nonunion sheriffs. Three juries will be necessary for a case, as each jury will be allowed to serve only an eight-hour shift.

Union stenographers will write only such letters as

have been approved by the riding delegate. All words of more than two syllables will be barred and each letter must not be over three paragraphs. Union bank clerks will refuse to bother with anything smaller than \$100 bills and riding delegates will collect 10 per cent of all moneys counted. Babies will have to take out cards in the Babies' union under penalty of being deprived of their milk, and will be allowed to play only with dolls that are members in good standing of the Dolls' union, each having the union label.

But we fear the White Collar boys are wasting their time; their motto will always be, "United we stand for it—Divided we fall for it."—*J. P. McEvoy in Chicago Journal.*

UNDER MATERNITY BENEFITS EVERYBODY SEEKS ASSISTANCE

Henry J. Harris writing about certain "maternity" benefits systems in certain foreign countries, "U. S. Department of Labor, Children's Bureau Publication, No. 57, p. 20, that in Australia (according to certain statistical sources quoted) "in the four calendar years, 1913 to 1916, there were 539,994 live births reported and 539,255 births for which maternity allowances were paid," and that it costs in the same country (Ibid. p. 19), "when there were no extraordinary expenditures for war purposes, three per cent of the government's expenditure was devoted to maternity allowance." Surely needy maternity and child welfare cases can receive proper charitable attention, private or public, without such general pauperizing legislation.

The fact that local taxation (calculated to raise \$1,000,000 in the county or \$650,000 in Chicago) was being urged upon Illinois for an object that was not demanded by any of the public or private child welfare or charitable agencies, merely on the grounds that Illinois should be able to get a very little share out of a prospective "pot" into which she would be required to pay a great deal, caused the Civic Federation, first, to oppose the depending Federal Maternity legislation on the grounds that it tended to stimulate unnecessary local expenditure, and, second, to inaugurate an investigating into the whole field of federal "aids" to State and Local governments.—*Civic Federation of Chicago, Bulletin No. 43.*

KIND WORDS FOR THE DOCTOR

A MINISTER EXCUSING DISBELIEVING PHYSICIANS

Some time since the Reverend H. A. Delano delivered a sermon on "Physicians" in the First Baptist Church of Evanston. He said in part:

"The annals of history are pregnant with the deeds of unwearied inventors, intrepid investigators, unselfish heroism and noble martyrdom of life given for others. The history of medicine is the history of great men, great talents, marvelous industry, careful investigation, startling discovery and tremendous sacrifice. How many, how illustrious and how worthy the names that shine in the annals of medicine, surgery and this great study of humanity! These men have been pioneers in the untried realms of disease. They have met with

facts as stern as fate and as stubborn as death. If anybody is ever excused because of skepticism I think it will be the physician. He has seen a thousand theories of science shivered to atoms. Taught by theology the mercy of God, he has lived in realms of stygian darkness, fever and chill. He has moved through hospitals of pain and suffering supreme; witnessed the horrors of an inferno upon battlefields of blood; invaded alleys rank with filth and tenement houses malodorous and sickening; seen humanity swarm and struggle, spawn and die; beheld the birth of monstrosities appalling; seen the iron-handed, inevitable relentless trend of heredity; witnessed the murderous tyranny of fashion, that chokes life to death ere life is born; heard the secrets of the chamber; and yet men wonder that he is often a materialist, a doubter of humanity and a relentless foe of religious shams, follies and crimes.

HUMBLE BEFORE MIGHTY FACTS

"There are, however, great exceptions. The Christian physician is often found reverent before the awful mysteries of the unseen, humble before the mighty facts revealed; tracing the infinite mind in all the wonders of the strange mechanism of these bodies. When theology has a larger basis of reason and good sense in it; when the doctor shall find the preacher sometimes attributing the death of a child to green apples rather than providence; when clergymen admit the possibility of error in creed as well as in science; when we shall persuade men that the best care for the life to come is the care of the life that now is; when we shall have taught people that disobedience to the laws of nature is a crime against the law of God, then I know there shall be fewer skeptics among our earnest and learned physicians."

OPEN CHARITY HOSPITALS TO RICH AND POOR ALIKE, IS PLEA

DR. HUGH CABOT ALSO ADVOCATES FULL TIME DOCTORS FOR UNIVERSITY INSTITUTION

According to the *Detroit Free Press*, August 2, at Ann Arbor, Michigan, on August 1, the Doctor said:

"The limitation of the service of the University hospital to the indigent people of the state, to my mind, is undemocratic," said Dr. Hugh Cabot, professor of surgery and dean of the medical school of the University of Michigan and head of the surgical staff of the university hospital.

Dr. Cabot was speaking before the Kiwanis club at its noon luncheon Monday, and at the same time answering, in a measure, the criticism from doctors of the new plan to open the hospital to all people of the state, whether indigent or able to pay for their care and treatment.

Those people who can pay will be charged a reasonable price for their treatment. At the present time the fees of the indigent poor are paid by the counties from which they are sent.

Dr. Cabot believes the people of the state should

be allowed the advantages of the hospital and especially when the new hospital is completed and there will be more room than there is at present. Through state law, the indigent must be cared for at the hospital and at present there is little room for other patients. With the completion of the new hospital there will be room for both the rich and poor.

Dr. Cabot advocated full-time doctors on the university hospital staff, which means that the physician or surgeon on the staff will devote his entire time to hospital practice. At present most of them have their own private practices in addition to the university work, being only on part-time pay. Dr. Cabot believes it unfair to give a physician or surgeon university backing when he devotes half of each day to his private practice. It is expected the full-time service will go into effect with the completion of the new hospital.

WE HAVE CREATED A NURSING SYSTEM THAT IS TOO COSTLY

THIS SUGGESTION IS UNWELCOME TO TRAINING SCHOOL MANAGERS, BUT WE NEED TO FACE CONDITIONS AS THEY ARE

Dr. Norman Bridge, at the Commencement address at Rush College, June 16, 1920, in discussing the medical problem of the present day said:

"The next condition requisite is less expensive nursing. These patients cannot afford over \$2.00 a day in ordinary times. Registered nurses cannot work for that. This fact, and the need for less expensive nurses, reveals to us one of the hardships that have grown out of our commendable profession of nursing. We have insisted on such severe conditions for admission to our better training schools, and on so long a course of instruction, that we have created a nursing system that is too costly. It is necessary to have nurses who can work for half the wages that a registered nurse gets. The best remedy is a new one, which is to have young women with some grammar school education who can be drilled intensively for a few months on the simple, cardinal things that all nurses must do. Any bright girl can be taught in sixty days to take temperatures, pulse and respiration accurately, to prepare and administer invalid diet, to administer drugs in numerous ways, to give baths and fomentations, and attend to the personal wants of the invalid, and to keep accurate records of the patient, and of her own doings. For the average invalid these are the chief things required of a nurse. Of course, in critical cases a fully trained nurse would be necessary; also in most surgical cases, but not all; and where two or three nurses were required, one trained nurse and two assistants under her direction would usually be all sufficient.

What these young nurses should be called is a matter of taste. *Cadets* or *nurses' assistants* would do.

This plan does not disparage the dignity or calling of the registered nurse. Her standing would rather be enhanced if she had among her other attainments

the ability to manage and teach cadet nurses under her.

There is now a demand in many quarters for more nurses. This plan would provide more nurses; and the good offices of the present registered nurses, and a little more patience on the part of the doctors, would make it certain that nursing as a whole would not be lowered in standard, but rather improved, when we consider that many patients would have nurses with *some* training who now are nursed solely by inefficient lay friends.

As to the training schools for nurses, it is a serious question whether their curriculum should not be changed. For example, the students are taught from books the anatomy and physiology of the human body. Most of that could be left out without harm. With that omitted and more time given to laboratory work, in examinations of the secretions, excretions and tissues of the body, chemically and microscopically; and if the nurses were taught more of the social and public health usefulness in store for them, we would probably improve the output.

And it is a serious question, now being agitated, whether the three-year course for a woman who has already had some academic training is not six months or a year longer than is necessary. Dr. Philip King Brown, of San Francisco, a broad minded physician and a wise observer of this subject, says: "There is nothing in the training of nurses for the work that most of them do that warrants three years spent in getting that training."

Suggestions of this sort will probably be unwelcome to training school managers, but we need to face conditions as they are; and, with the evolving conditions in society and in science, it behooves us not to fancy that we have reached perfection in our methods. We should have minds open for any improvement that demonstrates its title. And one of the "things as they are" is the fact of a vast multitude of people between the two extremes of the rich and the very poor, who need and deserve some better things.

BOLSHEVIST INVASION OF MEDICINE QUESTIONED BY NEW HAMPSHIRE DOCTORS

ATTACK MADE ON SOCIAL UPLIFT AT THE RE-
CENT ANNUAL CONVENTION

EXPANSION OF STATE'S PUBLIC HEALTH AND
SOCIAL REFORM WORK IS MEDICAL
SOCIETY TOPIC

"State medicine," or the adoption of the "bolshévistic system of medical practice," has become the subject of some controversy in New Hampshire medical circles on account of the attack that was made on social "uplift" at the recent annual convention of the New Hampshire Medical Society.

The chief contributors to the present good-

natured discussion, which has gone on in the public platform and in the press, are Dr. M. L. Bugbee, who made the address at the doctor's convention which included the original attack on social uplifters, and Dr. Charles P. Bancroft, a member of the state board of charities and correction, and for many years superintendent of the state hospital at Concord.

Dr. Bugbee, in the first place, made the charge that the inhabitants of New Hampshire are erecting an imperfect barrier against disease by a barricade of sanatoria for tuberculosis, a system of district nursing, with its child welfare work, of school nursing, of Red Cross work and free clinics that have been established in various parts of the state.

COST OF "UPLIFT" GROWING

She claimed that all these things are a great expense to the state and individuals. Each year some form of uplift is being started which the present generation cannot pay for and for which a mortgage is being laid on future generations.

Each year the cost of uplifting grows and the tax for sustaining the work falls more heavily on the individuals. In discussing the Towner maternity bill, now before Congress, child welfare work, tuberculosis and other activities, Dr. Bugbee said that New Hampshire is not a rich state, taxes are high enough already, and they ought not to be increased in order to carry on some public health work which, on the surface without careful examination, seems good. On the contrary, the state should "cut the garment according to the cloth" and do only what can be paid for, she said.

One way to lessen the expenses of carrying on the manifold uplifting schemes would be to put all welfare work under a single administrative head. This would cut down overhead expenses.

In regard to the clinics which at first sight seem needed, the doctor called attention to the expense and raised the question of whether the number of people benefited by clinics is proportionate to the money spent for maintenance.

"Are we guarding them sufficiently from abuse by people we ought not to help from the public funds?" was another question asked concerning the clinics.

"Have we considered carefully what these free clinics mean in New Hampshire? Is it a short

road from them to what we know as state medicine? Do we want state medicine?"

As to maternity legislation, such as the Towner bill, the doctor doubted if the expenditure of such a vast sum of money by a minor government bureau will solve the problem of healthy children.

WORK OF CHILDREN'S BUREAU.

"Has the children's bureau of the department of labor fulfilled its promise?" the doctor asked. "Do we not all know, as medical men, that many fads and theories on child welfare work have started in that bureau? Are we prepared to hand over to the social worker and the visiting nurse the responsibility of this important branch of medical practice and do the medical work under their direction and guidance?"

"This is what the Towner bill means to us as medical practitioners. Will the welfare of mothers and children be furthered by this bill? Will not proper obstetric care be subordinated to sociological experiments by non-medical people who will be guiding this work by sentiment rather than by knowledge?"

"I think we should put ourselves on record as opposing the Towner bill."

THE OHIO STATE MEDICAL ASSOCIATION'S POLICY ON ANESTHESIA*

By WELLS TEACHNOR, M. D., President

In adopting a firm and definite policy in opposition to the nurse anesthetist and repudiating the survey of the special committee, the State Association through its House of Delegates, has made clear in almost unanimous terms to the officers of the Association the course they must pursue on this subject.

The constitution provides in Section 3, Chapter VII, that "The Council shall be the executive body of the House of Delegates between sessions and shall act in its stead and with the same powers conferred on the House of Delegates by the constitution." But it does not confer on this body the authority or power to abrogate any action previously taken by the House of Delegates.

Immediately after the annual meeting the officers communicated to the members of the legislature the action of the House of Delegates in supporting Senate Bill 184 then pending, and in all other proper ways made a conscientious attempt to repeal the existing law empowering the nurse to administer anesthetics, but were met with the rush of the closing hours of the legislative session by unsurmountable opposition.

It certainly is to the interest of the public that professional ideals be maintained and that progress in

medical science be encouraged rather than to extend its practice to agencies of uncertain and limited qualifications.

The action of the House of Delegates should not be construed as an attempt to belittle the intellectual powers of woman or to place limitations on her attainments, nor to deprive the nurse of offices of trust and confidence, but a law legalizing the administration of anesthetics by nurses with the limited requirements of the course prescribed for them is not in harmony with the educational ideals of our profession. It is inconsistent that physicians should be made to compete with a six weeks' course as laid down for the nurse in anesthesia.

To place one with such qualifications in absolute charge of such an important surgical adjunct is too serious a proposition to merit the professional support. It is true that they will pass a sort of preliminary examination showing their ability for such work, but still they possess only partial knowledge. The extension of this privilege to the nurse is not in harmony with, and certainly invalidates one of the principal objects of our profession—"the prevention and cure of disease and prolonging and adding comfort to life."

Indeed the nurses of Ohio reasonably should be expected to oppose the present law and join with the medical profession in insisting on its repeal. By far the greater majority of nurses realize the importance of the work in their proper field and resent any effort to exploit them outside their regular and qualified functions.

It is foolish to say that sufficient medical anesthetists cannot be secured and that the employment of nurses must be resorted to; for a proper encouragement to the specialty of anesthesia and an adequate remuneration for such service will readily solve any apparent dearth of medical anesthetists.

We should develop and encourage a constructive plan which would be an incentive for our members and which would increase professional interest in the subject of anesthesia rather than lessen the morale of the profession by extending a certain practice to outside agencies which belong as much to the doctor as appendectomy and Cesarean section. I am now convinced that the existing law means increasing inferior service to the public and a gradual retrogression of the practice of medicine.

With the matter definitely settled as a policy of the Ohio State Medical Association, the controversy in so far as the Council is concerned, has ended, and it now devolves upon Council and the officers of the State Association to lay plans for the final consummation of this trust.

It should be borne in mind that the committee to be appointed, on authorization by Council pursuant to the request of the Ohio Public Health Association, will not be authorized to alter the policy now so clearly established; but to present such policy to the other interested groups for their information and guidance on a public health question.

Any new information secured and the result of con-

*The foregoing statement as a formal communication was submitted at the meeting of the Council of the State Association in Columbus on July 10, and was adopted and ordered published by the Council.

ferences may properly be submitted to the House of Delegates for its disposition at the next annual meeting.

CRUEL TREATMENT OF DRUG ADDICTS

The New York City Board of Health adopted an amendment to the sanitary code a few days ago, permitting the incarceration of drug addicts, and immediately thereafter a police hunt for these poor creatures was started. The hunt was fairly successful, quite a bag of game being brought in. The victims were thrown into cells, and the usual result of sudden withdrawal was shown in the death of one man and the collapse of several others who had to be treated by ambulance surgeons. According to the newspaper reports Dr. Carleton Simon, special deputy police commissioner, denied that the death of one man and the collapse of the others were due to withdrawal of the drug, and is quoted as saying: "There is no record of any drug addict ever dying because of drug removal." It must be that Dr. Simon was misquoted for no man fit to occupy his position could possibly be so ignorant of the elementary facts of drug addiction. As a correspondent shows in a letter published in this issue of the *Medical Record*, at least three acknowledged authorities on drug addiction, and he might have quoted others, make the unqualified assertion that death may and not infrequently does result from the sudden withdrawal of the drug. As, of course, Dr. Carleton Simon must be familiar with the literature of the subject, there can be no acceptable alternative to the belief that he was misquoted. But that being postulated, the fact that one prisoner died and others were in a serious state of collapse calls for explanation. Even admitting that 70 per cent. of drug addicts are criminals, which is another statement attributed, perhaps incorrectly, to Dr. Simon, the law does not permit their execution without trial, and whoever is responsible for this shocking inhumanity should be punished.

—*Medical Record*, Aug. 6, 1921.

THE HUMANE WAY OF TREATING DRUG ADDICTS.

What one State has done for those suffering from narcotic drug addiction.

Contrast the following with the results obtained from the dream book methods of treatment adopted in New York.

In a former issue we had the privilege of printing a splendid article by Dr. M. W. Swords, the efficient Secretary of the Louisiana State Board of Health giving an outline of the New Orleans system of handling drug addicts. At that time we expressed our warm approval of Dr. Swords' plan. As the months have gone by, the wisdom of the methods employed has been shown, although Dr. Swords has had many obstacles to overcome. A paper in the current issue of the *American City* by Paul W. Kearney, a well-known social worker, and from which we are pleased to quote, gives a remarkably keen analysis of Dr.

Swords' work, and states that the Louisiana State Board of Health is a modern organization that has approached the topic intelligently.

"The state of Louisiana," writes Mr. Kearney, "felt compelled to adopt some action with reference to drugs, considering the popular attitude, and therefore enacted a law aimed at the better control of the traffic. The enactment cut off the drug supply at its source, and should have, were the old theories correct, prevented all further trouble. What it did, however, was to start trouble!

"Dr. Marion W. Swords, Secretary of the State Board in New Orleans, was the man on whom the brunt of the outcome fell. Using Dr. Swords' own words, 'an avalanche of human misery' swamped him upon the enforcement of the regulatory law. Hundreds upon hundreds of addicts—for the greater part men and women in the best walks of New Orleans life—found themselves suddenly deprived of the one thing on earth they needed to keep body and soul together. As soon as their supplies were exhausted, the poison began to work and they were torn to distraction with their suffering. Observing these conditions with an open mind, Dr. Swords sensed the need for quick and constructive action.

"His first move, although it struck horror into the minds of many folks, was a master-stroke that saved the situation. He purchased a large quantity of narcotics from a wholesale drug house and sold it to everyone whose condition testified a need for treatment! The price was only 10 per cent. more than the actual cost, yet the net moral results of the plan greatly overshadowed the immediate financial saving to the addicts.

"Its instantaneous effect was the squashing of illicit peddling. As soon as the state law went into action, the underworld traffic started on a large scale. This will always be true. The addict, because he is a poisoned man, and because the opiate is an antidote to the poison, *must have the drug* until his disease has been cured by the gradual withdrawal of the drug under strict clinical control. If the law prevents him from getting it legally, he must then get it illegally. Putting a bill through the legislature is no manner in which to stop the *need* for a drug! That has been proved in every locality where strict regulations have been heedlessly enforced.

"But the New Orleans plan promptly removed all opportunity for illicit traffic. The man who needed narcotics first convinced the medical authorities that he did, through the medium of expert clinical examination—an item neglected in most other cities—and then he got what he required without any of the disgrace and ignominy attached to that procedure elsewhere. The peddler found that he could not compete with the state's price, so he deserted New Orleans for vicinities where he could ply his trade with the inadvertent cooperation of the authorities.

"Meanwhile hundreds of sick addicts were being given the best medical attention, and every precaution was taken to guard the confidences these people placed •

without restriction in the hands of Dr. Swords and his men. Two physicians and a nurse worked on the job. A dispensary was equipped and divided into four sections, for black and white males and females. A confidential record was kept in a book never in any one's hands but Dr. Swords'; no elaborate registration system was used, such as has failed in New York, for it was even made possible for the addict to get his opiate under a *nom de plume*, provided he kept the same name all the time. This was easily checked back through the signatures and other incidental information. In New Orleans there was no finger printing and photographing of the addicts; no long waiting lines pointed out to sight-seers from rubber-neck cars; no duplicate card forging; and none of the other disgraces so common to the old-fashioned method. The addict there is treated as a patient and not as a subject for publicity!"

The Fundamental Purpose of the New Orleans Clinic, and the Results Obtained.—On such a sensible foundation did the Louisiana Board of Health operate. The clinic was founded on these principles:

"1. We realize that a permanent cure of those afflicted with drug addiction-disease is impossible in the great majority of cases, unless the addict be placed in a position to secure scientific treatment. The sole object of this dispensary is to relieve suffering until such time as a scientific treatment may be had.

"2. The basis of operation is legitimate supply versus illegitimate trafficking.

"3. To prevent a victimized people from being more thoroughly victimized by heartless, profiteering ghoul. To prevent the marking of new addicts.

"4. Diminishing petty thievery, which constitutes a tax or burden on society, for the reason that many addicts, unable to pay the price of from \$1 to \$3 a grain, are forced to criminal methods."

Dr. Swords aptly summarizes the outcome in these words:

"Temporary relief of addicts at a minimum cost. No new recruits through this dispensary. Petty thievery diminished among the lower class of addicts. We have made economic assets of many who formerly were human derelicts. We have made happy mothers and children by enabling fathers and husbands to keep honestly employed. We have raised the morale of addicts so that they no longer wish to steal since the actuating motive has been removed. We have surrounded the high-type addict with security and protection, and concentrated and segregated the principal offenders in petty crime. All of this has been accomplished at no cost to the State Board of Health."

Especial attention is called to that last phrase—"at no cost to the State Board of Health." In itself that is a remarkable accomplishment. They not only got enough money from their small profit of 10 per cent. to pay expenses, but they also managed to create a fund of several thousand dollars which has been put into facilities for the study of the disease! Considered together with that unforgettable fact that it also eliminated the peddler, the genuine value of Dr.

Swords' original master-stroke is seen at a glance."

It will be a matter of great satisfaction to the many friends who have been watching Dr. Swords' undertaking to learn that the attempt to discredit him and his work failed ignominiously. Fortunately, Louisiana has a big, courageous, intelligent man for governor, and Governor John H. Parker was able to see at once what Dr. Swords has accomplished. His words of approval and encouragement to Dr. Swords carried hope and cheer to every earnest worker who is trying, no matter how humbly to help solve this great problem of narcotic drug addiction.—*American Medicine*, March, 1921.

A LENINISH CONSUMMATION DEVOUTLY TO BE AVOIDED. WHEN THE RAPIDLY APPROACHING TIME ARRIVES WHEN EVERYBODY WILL BE WORKING FOR THE GOVERNMENT

MARCELLING EACH OTHER'S HAIR AND SHAVING EACH
OTHER AND WE WILL ALL BE FLOOR WALKERS,
SHIFT BOSSES, FOREMAN AND DEPARTMENT
MANAGERS

When Mr. Edward G. Lowry was giving us the information that every sixty-eighth person in this country old enough to earn a living is working for the United States Government, I wish he had added up the numbers of people in the army, navy, state, city, town, county, village and township employ. Thus the whole government pay roll would have been taken in. Each of us could then have told what part of a person he has to support, in addition to his own family. It would be a goodly fraction. And I wish he had given us what the economists and statisticians call a graph—one of those sheets with squares all over it, and figures along the edge, and wiggly lines climbing up and down and across. Such a graph would perhaps arouse angry passions, but sometimes that is just what the country needs.

With such a chart the wayfaring man, though a fool, as most of us are, in a manner of speaking, could compute how long it will be at this rate before we shall all be working for the Government—a Leninish consummation devoutly to be avoided. But the present writer is not permitted to draw the many interesting conclusions which yearn to be pointed out. Working for the Government is a great industry; but my theme is another great occupation—that of making a living by telling the Government how to govern. This is what Dave Cowan would call "a good loose trade." Anyone may take it up. There are great opportunities in it, for it is growing fast, this good loose trade of working on the Government while it governs. And when the rapidly approaching time arrives when everybody will be working for the Government, thus making a living by marcelling each other's hair and shaving each other, these unofficial governors of the Government will naturally be the floorwalkers, shift bosses, foremen and department

managers. That may be why they are hopping in such an amazing way to this good loose trade now under discussion.

Saturday Evening Post, May 21, 1921.

MEDICAL LOBBIES AT WASHINGTON

The *Saturday Evening Post*, May 21, 1921, gives a list of several hundred organizations that maintain a representative or lobby at Washington at this Session of Congress. Among the Medical organizations enumerated are the following:

American Medical Liberty League,
American Public Health Association,
American Chemical Society,
Association for Prevention of Tuberculosis,
American Nurses' Association,
Child Health Organization,
Chemical Alliance Incorporated,
Citizens Medical Reference Bureau,
Community Development Service,
Community Center Association,
Child Welfare Society,
Christian Science Association,
Federation for Child's Study,
International Health Board (Rockefeller Foundation),
League for Medical Freedom,
National Organization for Public Health Nursing,
National Physical Educational Service,
National Society for Humane Regulation of Vivisection,
National Catholic Welfare Council,
National Community Board,
National Committee to Secure Rank for Army,
National Army Nurse Corps,
National Camp and Health League,
National Child Health Council,
Russel Sage Foundation,
State & Prevention Health Officers' Association.

DR. REUBEN PETERSON SAYS

THE GENERAL PRACTITIONER HAS IT IN HIS
POWER TO BE PAR EXCELLENCE THE
TRUE PHYSICIAN

Dr. Peterson in the August, 1921, issue of the *Ohio State Medical Journal*, in an article entitled "Obstetrics and Gynecology from the Standpoint of the General Practitioner," deplores the tendency towards specialism and group medicine in attempting to meet certain necessities in the practice of medicine. The author cannot but see that aside from calling counsel in obscure conditions and difficult operative procedures, the general practitioner can handle routine cases met with in obstetrical and gynecological work, in fact he believes there is a very decided reaction

in favor of the all around efficient general practitioner coming back into his own.

In speaking of obstetrics and gynecology in relation to the general practitioner he speaks as follows:

Let us look at one specialty, obstetrics and gynecology, in relation to the general practitioner to illustrate what has been said. I refer to this one specialty for in reality it is or should be one, for it is impossible to understand and practice obstetrics, the functioning of a certain definite part of the female birth canal without a knowledge of the disturbances to which this canal may be subject—gynecology—and the reverse is even more true. Now, what is there about obstetrics the intelligent, well-grounded, observant practitioner can not acquire? Certainly it is within his power to gain a satisfactory idea of the size of the bony pelvis by pelvimetry for there is nothing difficult or mysterious about the use of the pelvimeter. He is or should be constantly training his fingers and hands so that he ought to be able to gain a fair idea of the size and position of the fetus. Since he is accustomed to the use of the stethoscope he ought to be able to hear and keep track of the fetal heart. Better than anyone else he knows the life history of this patient, knows of hereditary tendencies or is aware of congenital defects. In fact no one is in a better position than the general practitioner to counsel and safely guide his patient through her pregnancy. By frequent examinations during this period he can assure himself that no toxemia is present or threatening. An elaborate metabolism apparatus and extensive laboratory outfit are not necessary for this work.

And the same may be said for all pre-natal work. The simplest methods will suffice. Only the practitioner must have outlined a plan and systematized his work, so that the pregnant patient will be cared for and not neglected and the same thing may be said of the labor itself and the puerperium. His patient must be taught that while labor is a natural process, in a certain proportion of cases it is abnormal and that each case is potentially abnormal until it has been proved otherwise.

Just as any operation can be performed safely in any home, if sufficient time be given for preparation, labor can take place in any home with perfect safety, provided a plan of campaign has been thought out carefully in advance and certain things guarded against; and the cost of such preparations will be slight. Soap, boiled water and clean linen are not beyond the purse of the large majority of women who bring babies into the world.

In operative obstetrics the practitioner must insist upon the necessity of having competent professional counsel and help. Somehow I mistrust the practitioner who is continually boasting of what he has done in obstetrics alone or assisted by incompetent women. Usually it shows poor planning and should be apologized for and not boasted of, since it is not emergency

operating but an event which was known to be coming off for six months or more.

The woman should have the same careful attention during the puerperium. Nurses can be trained in any community to do careful aseptic work and thus save the physician's time during the puerperium, but this arrangement can only be carried through by considerable careful planning. It is no safer to trust to luck during the puerperium than during pregnancy and labor.

If the practitioner has done his obstetrical work faithfully, gynecology in his practice will be reduced to a minimum. Excluding neoplasms and venereal infections, the large part of a gynecologist's work comes from poor obstetrics. The practitioner is in a position to be an ideal gynecologist, speaking broadly, and not merely from the operative standpoint. Who occupies a better position to treat skillfully functional menstrual derangements? Since he is intimately acquainted with the lives of his patients, secret and open, he is able to decide whether tender ovaries, with the accompanying dysmenorrhea be due to disease, to sexual excess, mental overwork or to general disturbances.

The general practitioner's fingers can be trained for accurate gynecological as well as obstetrical diagnosis. By following out a few simple rules he will be able to detect early carcinoma of the uterus, for patients go to their family physicians long before they consult the specialist.

It is within the province of the practitioner to reduce greatly the curse of venereal disease. He has many opportunities of instructing boys and young men regarding the true nature of venereal disease in relation to their future wives. He will be in a position to correct the erroneous impressions the young have had instilled into them of the harmlessness of the ordinary gonorrheal infection.

In effect, the general practitioner has it in his power to be par excellence the true physician since he will be in a position to prevent and not simple cure disease. This according to Sir James McKenzie is the highest form of medical art, of far more value than is the art of the surgeon who must do the best he can with conditions as he finds them, with oftentimes disappointing results.

Above all, the general practitioner is in a position where he can bring his common sense into play. Carried away by no fads or foolishness, he can study the entire mechanism of his patient and get a most accurate idea of the ailment or ailments with which the organism is afflicted. Perhaps, best of all he can come into human touch with his patient, he can offer him that aid, not medicinal but spiritual which is priceless to him who receives.

THE PEOPLE ARE CRYING OUT FOR THE HUMAN SIDE OF MEDICINE.

SOULLESS MEDICINE PROPERLY DESCRIBES THE PRESENT TREND OF THE TIMES. WHAT THE COUNTRY WANTS IS MORE FAMILY DOCTORS

Dr. Reuben Peterson in the August issue of the

Ohio Medical Journal in speaking of community hospitals, state medicine, etc., says:

FUTILITY OF STATE MEDICINE

I am not alarmed over the coming of State Medicine. If some misguided legislature does try the experiment, the recipients will in time repudiate it because it is bound to be machine-made and savor of all such goods. If some autocratic power should attempt to force such medical treatment upon the so-called laboring classes, instinctively they would protest and rebel and they would be right in so doing. Yet since it is something they are seeking, something to be obtained for nothing, or next to nothing, they are eager for it. If it comes it will be a soulless medicine and for that reason will fail.

Neither am I very enthusiastic over state provided community hospitals. Not that such hospitals in districts or counties are not desirable institutions but I doubt whether schemes for multiplying such hospitals in communities where the medical profession on their own initiative has not brought them into existence will be successful. As I see small hospitals springing up all over the State in which I reside, it seems to me as if the medical profession and the communities are solving such problems about as well and as fast as is good for them. Growth medically as in other professions and walks of life must come from within and not from without. If general practice has become distasteful to many men, the fault lies with the practitioner who has it in his own hands to change conditions. This can not be done by apologizing for one's work and saying that the plan is to give up this or that part of his practice and become a specialist. The remedy lies in harder work in ways which will accomplish more and render life more satisfying. I know of no more miserable existence than that of a pill vender. On the other hand there is no occupation more replete with interest and satisfaction than is that of the general practitioner. But one must be alive not half dead to make a success of this as with any other occupation. Alert, wide-awake, studious and tactful general practitioners could put half the specialists in the land out of business in the next decade unless the specialists wake up and change their tactics.

CONCLUSION

However, that is not the point I am striving to make, which is this:

The general practitioners have been fooling themselves when they have the game in their own hands. This country is not looking for specialists; they are to be found on every corner. What the country wants is more family doctors, general practitioners, call them what you please. It wants them because instinctively the people are crying out for the human side of medicine. Will the medical profession answer this call? If it will I for one am firmly convinced that the people of this great and prosperous country and the medical profession will be better off.

CHIROPRACTIC LEGISLATION IN NEW YORK

THE CHIROPRACTIC BILL

The Chairman of the Legislative Committee of an open letter states the immediate need of active work by all members of the State Society in opposing a measure about to be introduced in the Legislature which proposes the license of chiropractors. In opposing this measure the opinion of those who assume to pass judgment on the wisdom of this step must not be based on anything but established facts, and sufficient positive evidence is at hand to make conjecture unnecessary. Attention is directed to the following statement which contains a series of facts which seem to justify the recommended action.

A STATEMENT ON CHIROPRACTIC

BY THE PUBLIC HEALTH COMMITTEE OF THE NEW YORK
ACADEMY OF MEDICINE

The interest of the medical profession in its opposition to the licensure of Chiropractors by the State of New York does not represent dissatisfaction with a school of the healing art conducted by competent educated persons skilled in the recognition and treatment of disease. It is not a subterfuge request to the State to guard the welfare of the recognized profession. It is a "safety first" warning by men qualified to judge the health interests of the State. The safety of the Commonwealth demands careful attention to at least one fundamental factor, namely: Are the exponents of Chiropractic properly qualified to maintain the chief established principle of public health—the *prompt recognition and isolation of communicable disease*? An unbiased study of the requirements for graduation and practice of Chiropractic indicates that the Chiropractor is not by education or undergraduate experience in the least qualified to distinguish between communicable and non-communicable disease. Thus, license of the Chiropractor will immediately negate the elaborate, costly efficient efforts of the public health officials of the State in the prevention of epidemics by prompt report and segregation. This opinion is based on a large amount of collected evidence from which a few facts only are mentioned here to confirm the stated conclusion. In the Announcement of the Palmer School of Chiropractic, the foremost teaching institution of its kind, the following is said of contagious disease; "Medical pathology assumes that contagious disease always existed, or, at least they seem to suppose that each one caught it from someone else and if they could cure each person having such a disease, there would be none to catch. Chiropractic pathology finds that the same cause that produced the so-called contagious disease in the first person that ever had it, produces the same in the second. To correct the cause of the contagious or other forms of disease in one, means to be able to do so in others. Disease conditions are similar, differing only in degree and Chiropractors find the causes in the body and not externally." In other words, the Chiropractor treats

contagious diseases in the same manner as he treats all other conditions.

Study of the following text-books of Chiropractic demonstrates an absolutely inefficient description of communicable diseases and the safeguarding of the public health.

Harry E. Vedder: A Text-Book on Chiropractic Physiology, Davenport, Iowa, 1916.

Willard Carver: Psycho-bio-physiology—consisting of applied psychology, biology as the cause of histology and anatomy, and a description of the conduct of anatomic parts which is physiology. Oklohomia City and New York, 1920.

Harry E. Veller: A Text-Book on Chiropractic. Gynecology, Davenport, Iowa, 1919.

S. Burich: A Text-Book on Chiropractic Chemistry, Davenport, Iowa, 1919.

Examination of the Announcement of the Palmer School of Chiropractic, Davenport, Iowa, demonstrates that no opportunity is given to the students for the recognition of communicable disease and no training in the safeguards to prevent the spread of such diseases.

While the evidence at hand is amply sufficient to prove the absolute inability of the Chiropractor to recognize communicable disease from the knowledge and experience he gains at his institution of learning, conservatism and stern justice demand a complete, searching investigation of chiropractic claims in the treatment of non-communicable disease before definite conclusions are justified. Such investigation is now being undertaken by one of the Foundations interested in professional education and the outcome is awaited with interest. On command of the Lieutenant-Governor of Ontario, Canada, the Honorable Mr. Justice Hodgins of the Supreme Court was given a commission to investigate medical education in Ontario, and his report in 1917 fills a book of 117 pages. Relative to Chiropractic he considered all phases of the problem, its origin, progress and practice. While careful study of the entire report is fully justified, the following brief abstracts are sufficient to indicate his conclusions:

"The repudiation by the Chiropractor of all modern scientific knowledge and methods is such that it would be impossible to recommend any way in which they could be allowed to practice by which the public could be safeguarded. Their case was well presented, but was definitely Ishmaelish. Those who appeared before me saw no necessity for preparatory qualifications, ridiculed and repudiated diagnosis, bacteriology and chemistry; admitted that a chiropractor acts in all cases on his cardinal principle, without examination.

"Dr. B. J. Palmer, the head of the most important chiropractic college in the United States, in giving evidence in the case of the State vs. Janesheski, in December, 1910, when asked whether, when a patient came to a chiropractor, he was asked the history of the case, answered: 'No, because it be of no value;' and in answer to why that was so, said: 'A

person comes to us without telling us what the trouble is; it makes no difference whether a physician has already diagnosed it as insanity, appendicitis, indigestion, or anything they call it. The chiropractor needs to know nothing about that case from a physician's standpoint; it is immaterial, yet he can take that case, put it down on his benches and analyze that spine just as accurately without knowing those things; in fact, sometimes I think better. . . . It is not essential the chiropractor should know what that patient said he had, but you can adjust the current for it running into the organ, and the patient is well. That is where chiropractics becomes purely a mechanical proposition, a mechanical and electrical-making circuit proposition in a man.'

"I cannot bring myself to the point of accepting, as part of our legalized medical provisions for the sick, a system which denies the need of a diagnosis, refers 95 per cent. of diseases to one and the same cause, and turns its back resolutely on all modern scientific methods as being founded on nothing and unworthy even to be discussed."

WELL DONE THOU GOOD AND FAITHFUL SERVANT.

A TRIBUTE TO THE COUNTRY DOCTOR. A TOAST.

Mr. Sympsiarch and Members of the Society:

Ever since the great novelist, Ian Maclaren, wrote that wonderful description of Doctor McClure, "The Doctor of the Old School," the Country Doctor has been greatly in evidence. He has been the subject of many an elaborate and eloquent address, the theme of many an able paper, and the burden of toasts at every medical banquet. He has been praised, lauded, applauded and eulogized, until he has become vain and supercilious, so that he is in great danger of losing that diffidence and modesty that has ever characterized him and has been his chief charm.

Thus, upon this occasion, your honorable program committee fully realized that it would not be complete unless the Country Doctor were represented on the program, and their choice necessarily fell upon me, a life long country practitioner, sporting the usual "ear marks," and portraying by my makeup, dialect, and actions, my rural environment. I want you to bear record that my language, on this occasion, will consist of a mixture of country jargon and scientific balderdash. This is to be an illustrated harangue with illustrations by the author. I am here representing the Country Doctor from the Big Woods. I am here on exhibition, as it were, like a Jersey Bull at a Country fair.

I am not representing an ideal, a perfect model, or a supernatural character, or a "Doctor McClure," but the plain, old-fashioned Country Doctor, with all his faults, frailties and weaknesses of which he has many, and with which I am more familiar than with his successes.

Still, on this occasion, we prefer to bury his delinquencies beneath a mantle of charity, for the simple

reason that I am too modest to parade my faults before you, and too big a coward to tell you of yours to your face. For, in our remoteness from the big cities, every one of us is compelled to sleep with a country doctor, at night.

I stand before you representing the country doctor who tries to be honest, to tell the truth, and practice medicine—three of the worst incompatibles ever jumbled together. A man so honest that he tells his best and richest patients that he does not know what is the matter with them, but that he will send them to the city specialist; that is thereby doing himself a great injustice and causes financial loss, besides telling a woeful lie about that specialist. I represent the Country Doctor who places a false estimate upon material things, who foolishly gives first place to character and knowledge and places as secondary the appearance of his horse, carriage, and his own personal adornments; when he ought to know that the estimate that the world places upon a fine horse and carriage and a plug hat is far above every other consideration.

This was fully illustrated in our community some time ago. A plain country doctor was called to attend an Irish lady in her confinement. After everything had passed off pleasantly, as it always does when the Country Doctor is at the helm, she called him to her bedside and asked his fee. Ten dollars, he said. "Tin dollars! oh begorra, for all of thot, I could have had a doctor with a plug hat."

I represent the Country Doctor whose patients are still in possession of, and have concealed about their person, their original inherited, home grown, appendices, gall-bladders and tonsils. They may possibly be slightly on the blink, as their attics may be filled with adenoids their gall-bladders with stones and their basements with hemorrhoids, but they prefer to "bear the ills they have rather than to fly to others that they know not of." And, in the not-far distant future, he fully expects to exhibit them, as people wholly and fully equipt, "as God made them" and not as abridged or expurgated editions.

Gentlemen, I recognize the fact that no single description can convey to your minds any adequate idea of the makeup of the Country Doctor. He is as variegated as the flowers upon the hillside or the birds of the air; sometimes the modest, unassuming, self-sacrificing disciple of Aesculapius, and sometimes a veritable quack and charlatan; sometimes a saint, and sometimes a sinner; sometimes a man with all that that implies, and sometimes a beast. When he is a beast, he is an ass in a lion's skin, or a wolf in sheep's clothing; and, sometimes, he is the innocent lamb led to the slaughter. Again, sometimes he is a lion. However, that is usually when he is telling you about how much money he is making and about the big practice he has.

I beg of you to bear witness that I do not represent the careless and indifferent country doctor that opens boils and abscesses with a cork screw and ties the umbilical cord with a shoestring; but, rather, the careful, conscientious resourceful practitioner who, despite

isolation and the handicap of lacking improved appliances, lack of trained nurses, and deprived of medical counsel and advice in grave emergencies, has fought, single-handed, a victorious battle with the monster death on account of his resourceful efficiency. A man indispensable to his community, who recognizes his ability, conscripts his varied talents, makes him president of the school board and elects him to various offices of more honor than profit. A man so beloved that he is an honored guest at every fireside, especially at weddings, reunions and homecomings where, in the absence of the "Dominie," he is called upon to say Grace at the table.

Seriously, though, Gentlemen, you may find the Country Doctor with his pockets filled with castor oil, bottles, tooth-forceps, and what not; but you will find his head filled with sound horse sense and practical knowledge. His old, worn medicine case may contain calomel and quinine and other life-saving appliances, but his big throbbing heart is filled with tenderness and love and sympathy for the sick and afflicted. His feet are always ready to respond to their call for help, and his bony hands are ready to administer soothingly and lovingly and gently to their needs. Don't look for his monument in the Hall of Fame; for it is not there. But you will find it enshrined in the hearts and affections of the poor and lowly, the sick unfortunate and afflicted. In the affections of those whom, like the great "Physician," he has "loosed from their infirmities." A monument far more enduring than that of granite or marble, a monument that the combined wealth of the Universe can not purchase, a monument that all the slights and false estimates of this cold cruel world can never tarnish. And, inscribed upon it in letters of burnished gold, is the welcome plaudit, "Well done, thou good and faithful servant."

D. EDWARD SPAHR,
M. Clinical Medicine.

Xenia, Ohio.

FOOT ABNORMALITIES AND THEIR MANAGEMENT.

Mebane (*The Military Surgeon*, October, 1920) notes that for the practical management of these cases three questions required solution: (1) What should we consider as a normal foot? (2) What are the causes of foot trouble? (3) What is the most practical method of treating foot cases under army conditions?

In practice it was found that only two conditions need be met for a foot to be considered normal in the army sense—i. e., a foot on which a man can march and fight. The requirements are that there must be unrestricted motion of the foot joints, and that the line of weight-bearing must pass through the forefoot. Such considerations as height of arches are unimportant. Men accepted for the service on this basis had little foot trouble, and if trouble did develop, it responded to treatment in the great majority of cases. On the other hand, men accepted in violation of these requirements, such as cases of flaccid flatfeet with

abduction and eversion, rigid or spastic flatfeet, rigid arthritic or post-traumatic feet, marked cavus, ankle valgus or varus following fracture, marked hallux valgus, hallux rigidus, and amputation or severe derangements of the joints of the great toe, could only in a few instances be made fit for duty and in many cases were discharged from service.

Of the minor abnormalities, trauma due to wearing improper shoes played the greatest part. Abnormalities due to congenital causes or to trauma prior to entering the service were beyond control, and unless the disability was slight men with such disabilities were not accepted for full duty. With the men accepted for service it was found that much could be done to minimize the amount of foot trouble. Trouble resulting from trauma of improper shoes and overtaxing the feet could be prevented. Likewise, much of the disability from infection could be controlled. The measures found useful in preventing foot trouble were proper shoes, correction of faulty attitudes of walking, use of "foot strengthening" exercises, prevention of overtaxing, and elimination of infectious foci.

The shoe question for the soldier has been solved by the Munson shoe. This shoe possesses all the qualities desired for the average adult. The inner line is nearly straight. The heel is broad. The shank is stiff. The toe cap is wide. It gives the necessary support to the foot and at the same time allows development. Support for the adult foot, particularly in the early stages of military training, is very desirable. This support is required on account of atrophy of the foot muscles which has resulted from the prolonged wearing of the short and narrow shoes in civilian life. The shoes must be properly fitted and at least a half-inch space must be allowed in front of the great toe. The degree of foot development that has resulted among soldiers from the use of properly fitted Munson shoes has proven a revelation to the surgeons.

The most frequently encountered faulty attitude of walking among soldiers is that of "toeing out." This attitude by throwing excessive weight on the weak inner border of the foot invites strain of the longitudinal arch. This danger is increased when heavy packs are carried. The remedy lies in teaching the importance of walking correctly, with the inner borders of the feet parallel. It has also been found that it is well to avoid excessive "toeing out" while standing. Strain can be prevented among those who are required to stand for long periods by frequent changes of attitude, standing with inner borders of the feet parallel, "toeing in," and turning over on the outer borders of the feet.

The use of four simple exercises has been found of great benefit in strengthening the foot muscles of soldiers in training. They must be given with the men wearing correctly fitting shoes so that the play necessary for muscle development may occur. The exercises require only a few minutes and can be given daily as part of the setting-up exercises. Each exercise is repeated about ten times. The exercises are:

Rising on the outer borders of the feet. In this exercise the men stand with their feet six inches apart and the inner borders parallel. The exercise is done on counts given by the officer or noncom in command. On the count 1 the men rise on the outer border of the feet, and on 2 they come back to their standing position.

Knee-twisting exercise. In this exercise the position of the feet is the same as in the above. The feet remain fixed and the motion is a twisting outward of the thighs and knees, which elevates the arches. The movement is accomplished entirely by the external rotators of thigh. It is likewise performed to two counts. On 1 the knees and thighs are twisted out, and on 2 the men relax, allowing the knees to return to their original position.

Toe exercises. The position of the feet is the same. The exercise is done by first bending up or dorsiflexing the toes, bending down or plantar flexing the toes, separating the toes, and then coming to rest. It is done to 4 counts: 1, toes up; 2, toes down; 3, separate; 4, rest.

Rising on toes. The men standing with feet parallel and six inches apart rise up on their toes as far as possible, turning their heels out as they rise. They then descend gradually. They should not "flop down." This exercise is given in 2 counts: 1 up; 2 down.

Foot trouble from overtaxing the feet is likely to occur in changing occupations, from one requiring little use of the feet to one where much is required, as in the case of soldiers, or in starting to walk again after an illness or operation. Among soldiers it was found that trouble could be avoided by increasing the foot work gradually. By drilling new recruits on a plan that provided for frequent rests and changes of instruction no time was lost and little foot disability resulted. The use of "foot strengthening" exercise was also beneficial. On the first sign of trouble, strapping the arches and relieving the strain on the longitudinal arches by raising the inner border of the shoe was practiced. During convalescence following illness or operation it was found an excellent plan to strengthen the foot and leg muscles by massage and exercises before the patient began to walk. Walking was allowed only in high shoes. Too much emphasis cannot be laid on the dangers of slippers or loose hospital shoes. Such shoes give no support to the ligaments and muscles weakened by disease and non-use. Strapping and shoe alterations were made use of if there was any evidence of weakening of the longitudinal arch.

Infection operated in the causation of foot trouble in two ways. In some cases the organisms were actually present in the joints and soft tissues of the foot. The diagnosis in such cases was usually relatively simple. In the cases where the trouble resulted from focal infection the question was not always so simple. Many cases cleared up with the treatment of an old gonorrhea, the removal of diseased tonsils, or attention to the teeth. The possibility of focal infection should always be considered in treating foot cases.

The correction of foot deformities of recruits by operation has been almost entirely abandoned. The reason for this is that experience has shown that a strong marching foot cannot be obtained in a reasonable time by operative producers. Much better results have been obtained by conservative measures. The use of adhesive plaster, felt and simple orthopedic alterations of the Munson shoe is sufficient to mechanically correct any case that is worth retaining in the service. The importance of strengthening weakened foot structures has not received the attention it deserves. The simple mechanical correction of a defect does not cure the condition. Stretched structures tend to regain their normal condition when relieved of strain by a correct appliance, but unless the muscles are strengthened so that they can stand the strain, removal of the appliance is followed by a recurrence of the original condition. We should aim in the treatment of static deformities of the foot to place the weight-bearing where it belongs by mechanical means and then educate the muscles to maintain it, so that mechanical aids can be dispensed with.

The use of some mechanical means to correct a static defect such as a weak longitudinal arch seems like a logical procedure, and in practice has been followed by good results. By such means weakened structures are relieved of abnormal strain, weight-bearing can be transferred to stronger parts, and the individual can be allowed about without danger of aggravating his condition. In civil life plates, felt pads and shoe alterations have been used as mechanical means to accomplish this end. In military service plates are impractical; they are expensive; they splint the foot and thus prevent development of the muscles. They also create a sense of dependency that is difficult to overcome. Felt supporters placed in the shoes are open to the same objections, and when strapped on the feet are dirty and render satisfactory use of the foot exercises impossible. Orthopedic shoe alterations have been found the only practical method under army conditions.

For longitudinal arch trouble, simple inside leather wedges have been found entirely satisfactory. The wedges are inserted between the layers of sole and heel of the Munson shoe. The thickness of the wedges varies from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch, depending on the case. Extending the heel or re-enforcement of the shank of the Munson shoe was found unnecessary. It is believed that failure to obtain results from shoe alterations has been due to the use of improper shoes, failure to adapt the height of the wedge to individual requirements, failure to properly carry out treatment, or to improperly made alterations. In reference to the last attention is particularly called to alterations nailed on the outside of the shoe. Such alterations, in addition to being unsightly, wear down rapidly and a uniform correction is not maintained.

For affections of the anterior arch the anterior wedge has been used. The wedge has been inserted between the layers of the sole in such a position as to transfer the weight-bearing from the heads to the shafts of the metatarsal bones. For successful re-

sults it has been found necessary to determine the proper position of the wedge by inserting it with the patient present and altering the location until relief of the symptoms has been obtained. A modification of the anterior wedge has been made use of in cavus cases. A broader wedge, placed further back, has been used, similarly inserted, so that weight-bearing was evenly distributed along the outer border of the foot. Cases of short heel tendon were treated by raising the heel of the shoe.

Measures to strengthen the weakened foot structures were commenced as soon as shoe alterations had been made. Graduated foot exercises were the most important means of accomplishing this end, but massage and contrast baths were made use of when possible. The foot exercises were ordered for cases of poor development of the foot muscles, subacute and chronic flat feet, ankle valgus, cavus, and the affections of the anterior arch. In acute foot strain they were not used until the acute symptoms had subsided. For the treatment of rigid or spastic flat feet preliminary treatment is required to convert the condition into a simple flatfoot.—*Therapeutic Gazette*.

AS THE MAKING OF SHOES IS THE BUSINESS OF A SHOEMAKER SO IS THE MATTER OF HEALTH CONSERVATION THE BUSINESS OF THE MEDICAL PRACTITIONER—HEALTH INSURANCE AND LABOR LEGISLATION

MR. JOHN MCF. EATON,
DETROIT

*I'm thankful that the sun and moon
Are both hung up so high
That no pretentious hand can stretch
And pull them from the sky.
If they were not, I have no doubt
But some reforming ass
Would recommend to take them down
And light the world with gas.*

While I do not want to be tiresome or to bore you with the recital of something with which you are all familiar, I think it would be well for us to consider in the beginning the principles of health insurance as laid down by the American Association for Labor Legislation and approved by them as a means of distributing the cost of sickness.

They state that "Health insurance should be required for all employees, to be paid for by employers and employees in equal proportion. The State should pay all costs of State administration as in the case of the workmen's compensation act and all costs of supervision of insurance carriers."

"The benefits to workers under health insurance should consist of: (1) Cash payment of a part of the wages of workers disabled by sickness; (2) complete medical care for the worker, including hospital and home care and all surgical attendance and the cost of all medicines and appliances; (3) adequate

provision for rehabilitation, both physical and vocational, in co-operation with existing public departments and institutions; (4) dental care; (5) medical care for the wives and dependents of the workers if the same can be done constitutionally, and a burial benefit for the worker."

In considering these principles you cannot afford to fail to consider at the same time and with them the forces and influences behind them. Compulsory health insurance has had no proponents other than the American Association for Labor Legislation and those misguided persons whom that organization has from time to time been able to enlist under its banner.

I am here, I think, primarily because I was recently foolish enough to admit to a group of westside doctors that I was a member of the American Association for Labor Legislation, and if I interest you it will be more because I am a member than because of anything which I may be able to say regarding health insurance itself.

The American Association for Labor Legislation was organized in February, 1906, and states in its constitution and by-laws—which incidentally is a very brief and loosely drawn instrument—that the purpose of the organization is to promote uniformity of labor legislation in the United States and to encourage the study of labor conditions in the United States, with the view of promoting desirable labor legislation. At the time of its organization it appealed for members and the consequent financial help to the many employers who were misled by the published purpose of the organization to the extent of endorsing and supporting it, and as a result of this good start and the galaxy of prominent names which annually appeared upon the letter-heads of the organization, they have been able to secure a total membership of something over 3,000, although it must be said that the complexion of the membership row had probably changed since the organization of the association and now numbers a great majority of teachers and writers rather than "doers."

My first contact with the association came in 1916, when I attended the annual meeting at Columbus, Ohio, although I had previously come in contact with some of the officers of the association. The Columbus meeting disclosed the fact that the association then had a paid-up membership in excess of 3,000, but its reportorial staff of 20 persons, and that during the previous year it had been active in sending out press stories in the publication of leaflets and pamphlets to the total number of 166,500 in the distribution of some 113,000 copies of 100 different circular letters and correspondence which was incidentally distributed on to 100,000 copies of the official letter-head of the organization bearing the names of all of its officers. That year the deliberations of the association were presided over by President Irving Fisher, and there appeared in the printed line of the Executive Committee and the General Administrative Council a number of names familiar to all conversant with the progress of agitation for health insurance in this

country, Meyer London, Socialistic Member of Congress from New York; Mrs. Raymond Robbins, of Chicago; Dr. I. M. Rubinow, for several years an active advocate of this form of social reform; William B. Wilson, Secretary of Labor; James Duncan, an officer of the American Federation of Labor; John P. Fry, publisher of the *Iron Molders Journal*; Samuel McCune Lindsay, Professor of Sociology at Columbia University, and a host of other trade unionist leaders and professional social reformers, make up the list.

At each of the annual meetings a short report of the previous year's activities has been made which, to the casual observer, offers nothing upon which he might comment. I find, however, that the report of the secretary covering the activities of the year 1916 has in it one or two significant statements—significant in that they indicate the type of organization which is behind such legislation as compulsory health insurance, old age pensions, maternity insurance and the like. Professor Andrews in his report of 1916 claimed as one of the definite legislative accomplishments of the association, the passage in that year of the Federal Employee's Compensation Law, and in reporting upon this achievement he stated that throughout three and one-half years of the association's agitation for the measure, it had been introduced in the national law-making body no fewer than eight times and he follows this significant statement with another in which he says that the most important movement in the whole field of labor legislation during that year was the advance of the association's program for universal workmen's health insurance, and that action taken at a meeting held in Boston in December, 1912, which resulted in the wide distribution of tentative bills for the consideration of state legislators, had come after three years of preparation; and he supplements this statement by the very significant one that the action of the Boston meeting had lifted the whole subject from the realm of academic discussion to that of practical politics.

In 1918 at the annual meeting of the association held at Richmond, Va., the secretary reported bills having been introduced in the states of New York, New Jersey and Massachusetts, and that a bill calling for an investigating commission had been introduced in the state of Maryland and defeated. The bill introduced by Senator Nicoll had died in committee. The bill in the New Jersey legislature had failed to come to a vote and the Massachusetts proposal had been killed through political strife. The same report tells that the secretary and members of the association staff had made many speeches and that the secretary had lectured in five colleges including two given at Mt. Holyoke to a group of men preparing to be industrial health specialists and one at Columbia to an employment managers training class. The report shows that there was no let-up in the activity of the association in the spreading of its printed propaganda, and the meeting closed, having selected a group of officers

and a general administrative council which included the name of such prominent professional reformers as Jane Addams, Rabbi Wise and Woodrow Wilson.

There are, to my mind, two classes of doctors. The first are those who *practice* and the second those who *preach*. The first class includes those medical men who, after having spent what has been variously estimated up to \$20,000 upon their education and preparation, go out to treat the sick and injured, charging for their service just as do the lawyers, in proportion to the service rendered. The second class include those doctors of letters who probably have never gone out into the rain and sleet with a case of medicine for which they have paid, and administered and dispensed to a suffering patient, but who nevertheless feel qualified to direct the practicing doctors in the conduct of their business. Of this second class of doctors is the personnel of the American Association for Labor Legislation largely composed and their activities are engineered and directed by professional reformers—men and women whose sustenance depends upon their ability to agitate those forms of so-called social reform which will best please and keep interested the mass of their membership.

The employers have been opposed to compulsory health insurance upon one ground and one ground only; and that is that what has been proposed by the American Association for Labor Legislation is not in proper sense health assurance. The contention that because workmen's compensation laws resulted in fewer accidents, compulsory health insurance will result in less sickness, is not a good one.

Workmen's compensation did reduce the number and seriousness of accidents because the employee was under the control of the employer during all the time that compensable accidents were possible and, being under the employer's control, was subject to such rules of safe conduct as the employer devolved. The employer, however, has no such control over his employees in the matter of preventing sickness. He is helpless in the matter of controlling proper eating, proper dressing or moral conduct. He cannot require those frequent medical examinations which alone are the first step to health insurance, nor can he insist upon corrective surgical operations when they become the controlling health factor. He has no method by which he can demand the reporting of a sickness at the beginning of disability or the treatment of minor injuries by a medical practitioner. He is powerless in enforcing cleanliness or any of the measures designed for the prevention of venereal disease. He is offered nothing whatever except an opportunity to pay two-fifths of the cost of health insurance.

No one opposes sane health measures, but the employers of this country feel that just as manufacturing is the business of a manufacturer and the making of shoes the business of a shoemaker, so is the matter of health conservation one for the medical practitioner, and they oppose any movement fathered by professional reformers and agitators which has upon

the face of it no object other than to take from the "have's" and give to the "have nots."

I loathe the boob who eats grapefruit
And sprays the juice upon my suit,
And squirts it in my eye, to boot;
There oughtta be a law!

The critter who politeness scorns
And does a jig upon my corns,
As through the car his way he horns;
There oughtta be a law!

The pest who crabs my funniest tale
By crying, "Gee! That thing was stale
When Jonah climbed aboard the whale!"
There oughtta be a law!

The bird, with bubbles in his tank,
Who intimates that I'm a crank,
Because I hate his antics rank;
There oughtta be a law!

—*Bulletin Wayne Co., Mich., Med. Soc., March 28, 1921.*

MID-WESTERN ASSOCIATION OF ANESTHETISTS

ORGANIZATION MEETING, KANSAS CITY, MO.

October 24-28, 1921

The Anesthetists of the Middle West will hold an Organization Meeting in Kansas City, Mo., October 24-28, in conjunction with the meetings of the Medical Veterans of the World War, Missouri Valley Medical Association, Medical Society of the Southwest and the National Anesthesia Research Society.

A splendid scientific program of pertinent papers is in the making for this occasion and the Clinics to be held will offer every opportunity to see and demonstrate the latest methods of anesthesia.

Membership in the Mid-Western Association of Anesthetists is open to all licensed and qualified members of the medical and dental professions as well as to research workers holding doctorates of similar standing, who are interested in advancing the science and practice of anesthesia.

A Special Session will be devoted to Anesthesia for Oral Surgery and Dentistry.

Headquarters will be at the Hotel Muehlebach and the Scientific Sessions and Annual Dinner will also be held there. As a large attendance is expected at this Joint Meeting make your hotel reservations now.

If you wish to present a paper during the meeting kindly notify the Organization Secretary at once, giving the title and brief abstract of same.

Fill in the details of the enclosed Membership Application and return it with your check or money order for the annual dues (\$5) so that your Charter Membership Card may be sent you. Also send in the names and addresses of as many prospects for membership as you may know of.

The Visiting Ladies will be delightfully entertained

so let the Secretary know how many will be in your party.

The following are the officers for the Organization Meeting: President, R. M. Waters, M. D., Sioux City, Iowa; vice-presidents, David E. Hoag, M. D., Pueblo, Colo., and Nettie Klein, M. D., Texarkana, Texas; secretary-treasurer, Morris H. Clark, M. D., Kansas City, Mo., and members executive committees, B. H. Harms, D. D. S., Omaha; J. E. Craig, D. D. S., Kansas City; A. E. Guedel, M. D., Indianapolis; R. S. Adams, M. D., San Antonio; R. L. Charles, M. D., Denver, and E. M. Moorehouse, M. D., Yankton, S. D.

The Organization Officers and Executive Committee will do everything they can to make this meeting interesting, instructive and enjoyable and your cordial co-operation and support are solicited in launching the Mid-Western Association of Anesthetists on a successful career for the benefit of all concerned.

For further information, address

Yours fraternally and cordially,

F. H. McMECHAN, M. D., Organization Sec.,
Lake Shore Road, Avon Lake.

MORRIS H. CLARK, Sec.-Treas.,
Rialto Bldg., Kansas City, Mo.

SEXUAL FIGIDITY AND IMPOTENCE: A NEW ENDEMIC

VICTOR G. VECKI, M. D.,
SAN FRANCISCO, CALIF.

The purpose of the present paper is to place before the medical profession a few observations and facts, gathered in the course of many years of close study, re-enforced by information obtained by personal interviews and extensive correspondence with the most noted sexologists and genito-urinary surgeons in the United States.

The drive for sublimation of the sexual instinct, started modestly by obscure, unfortunate and disinherited victims of our social conditions, gradually gained momentum and becoming powerful, evidently is bearing fruit.

In presenting observations and facts only, it would be useless to enter into the discussion of the questions, which will only be answered when there will be left neither bone nor flesh of the present generation.

Is it the aim of so-called modern civilization to evolve a sexually indifferent being?

Is sublimation of the sexual instinct a blessing or a calamity?

In whichever way these questions may be answered it remains quite true that the heroes, or, as you may choose to call them, the victims, of sublimation of their sexual instinct are becoming more and more numerous.

The genito-urinary specialist is more and more frequently consulted by men and women in the prime of life complaining or only incidentally acknowledging sexual indifference and deficiency. Very seldom patients complain of frequent night emissions, but

almost regularly of feeble erections and premature ejaculation.

The authors advocating and even extolling masturbation are becoming quite numerous, the victims of excessive masturbation and over-indulgence rare. It is almost to laugh to hear what the average person describes as excesses. Almost daily some patient, complaining of premature sexual decrepitude confesses sexual excesses in the early years of his married life. Oh, yes, he overdid it at first—used to have sexual intercourse once and even twice a week!

The physician hears more about feeble excesses or of the excesses of the feeble.

Whenever a discussion on the prevention of venereal diseases takes place, the experts report to us that the repression of the sexual desires is easy to realize with our young men, all they need is a little diversion, a little healthful exercise and wholesome entertainment.

Most significant, however, is the fact that the number of people who are normal in every respect, but lack all sexual feelings, is constantly increasing. Only too frequently one sees men of a manly appearance, whose organs exhibit no abnormality, and yet who are absolutely and, what is worse, almost irremediably non-sexed.

Individuals in whom the incitomotor impulse which dominates the sexual functions is utterly deficient, were in former times a rarity; the old canonists who, by the way, were first-class experts in sexual questions, called the condition "*natura frigida*." The number of such people, however, is alarmingly increasing. Some of them are persuaded by inexperienced physicians to marry, and it is almost incredible how many of these marry in virginity and remain so, though united to a loving and beloved wife.

It is only an apparent inconsistency to speak of inherited sexual impotence, because the condition accentuates itself from generation to generation until absolute extinction of the sexual instinct takes place.

In a number of cases the sexual anesthesia is only relative, and extraordinary incitives may arouse the feeble spark, and under especially favorable circumstances coitus may be possible. One may easily imagine what happens when a man, generally sexually indifferent, in the course of more or less humiliating events, meets with such an extraordinary incitive. He either becomes a first-class henpecked husband or the slave of an affinity. The sexual weakling can under no circumstances escape the fate of being despised by the partner. And just imagine what happens when the wife finds out that the husband is wasting his sexual strength on another woman. The rich man is forgiven even if he presents a chorus girl with a diamond necklace, but the poor man will never hear the end of it if he even treats another girl to an ice cream cone. So the sexually powerful is easily forgiven, while the weakling finds no excuse.

Certainly we cannot wonder at the number of Xantippas, Henry-pecks and divorces.

The question why sexual indifference and sexual weakness should spread so rapidly is not easily answered. I think one of the main reasons is the repression of the sexual feelings in the female sex, and the formation of a vicious circle, the sons inheriting the mother's sexual frigidity, and the daughters meeting less and less frequently with red-blooded mates who would be capable of arousing the dormant sexual impulse.

In a large number of cases of congenital sexual frigidity we find the cause in defective glands of internal secretion. These are the cases that offer the best prospects for a cure, as frequently the proper medication with organic extracts accomplishes small miracles.

Those afflicted with inherited sexual frigidity of various degrees are also those who are so easily influenced by educational repression and the various efforts at sublimation. They are also the easy victims of sexual traumas sustained in childhood, also sustaining the teachings of the friend of my youth, Sigmund Freud.

The modern employer is vastly different from the slave driver of former generations. The latter with the whip in hand favored sexual promissuity, and profited by it in every respect. The modern moneyed boss has no vigor, consequently no desires; he strives that his employees should become efficient automatons, who will work for him on this earth with a view of being rewarded in heaven. Another vicious circle is formed; the refined and the so-called good are easily influenced, easily become the victims of repression, while the hoodlums in both classes, living as the predatory animals, do not respect law and age-limits, remain vigorous and propagate a race that sooner or later will rise and destroy the present order of things.

A mighty contributing factor in the preparation of the general debacle that must follow the present degenerative stage is the unfortunate only child. The only child, one of the miserable products of our unhealthy social and economic system, but frequently the result of gonorrhoea; the poor only child of wealthy parents, pampered and wrongly brought up, prevented from developing into normal red-blooded manhood, is doomed to sexual neuroses and an easy victim of sublimation of the sexual instinct.

Another potent factor is the large number of those who are in great haste to arrive at success, which mostly means to make money. They have no time for play, no time for love. Amongst them again the best elements succumb first, and when they begin to realize what has happened, they, the prominent citizens, pay fabulous prices for the imitation article, while the predatory hoodlum and the lounge lizards court the fair and by fraud and brutality gain her real love.

Yet another great factor in the general spreading

of premature sexual decrepitude and sexual frigidity is, as most physicians know, gonorrhoea with its frequent consequences, mainly the infection of the prostate, the seminal vesicles and testicles.

Then we have the large number of minor contributing causes, which, though seemingly having no connection with the sexual power, yet play an important part by keeping it at a low level. We only have to mention: bad condition of the teeth, the tonsils and mainly of the digestive organs. Most frequently patients complain of sexual impotence, while a foul breath, severe indicanuria and other symptoms point to the large quantity of fermenting and decaying fecal matter they carry, closely clinging to the walls of their intestines.

The modern endeavors to harness all of our efforts in the pursuit of happiness must produce a boomerang which will hit the wielder square in the nose.

The modern slave-driver is bound to obtain submissive docility, weakness, therefore the sexual instinct must necessarily be sublimated. Millions and millions are being spent to transform the whole world into a Sunday school class. Shall the medical profession look on, and after being harnessed join the harnessers? This little paper shall just be a warning cry, and I am afraid will remain the voice of the clamorer in the wilderness. Still we ought to know by this time that kindness and love alone can cure the mighty cramps from which the world suffers at present, and that finally nothing matters but love.—*Urologic and Cutaneous Review*.

Public Health

POLIOMYELITIS INCREASES

The State Department of Public Health again calls attention to the prevalence of poliomyelitis and emphasizes the fact that while the situation is not alarming it is serious enough to warrant the watchful attention of every physician in the State. Up to August 20th, 235 cases had been reported. Of these 48 occurred during the first six months of the year. Twice that number, or 96, were reported in July with 91 cases for the first twenty days in August.

While cases have been reported from all parts of the State definite foci of infection seem to center particularly in ten counties. These counties, together with the number of cases reported during the year from each are Cook, 54; Sangamon, 26; Lake, 18; La Salle, 13; Morgan, 12; Macoupin, 11; Kane, 7; St. Clair, 7; Madison, 7; McLean, 5.

Physicians are urged to be on the alert for suspicious cases and to report them promptly. A special bulletin giving complete rules and regulations for the control of poliomyelitis, and one describing, in catechism form, the disease, have been issued by the department and are ready for distribution upon request. The State is also prepared to furnish the services of consulting diagnosticians in doubtful cases.

Correspondence

THE SOVIET FEATURE OF THE SHEPPARD MATERNITY BILL EXCEEDS IN IMPORTANCE THE STRONG MEDICAL AND SOCIAL OBJECTIONS.

SOVIET COMMITTEES FOR ALL AMERICA

Boston, July 23, 1921.

To the Editor: National peril inheres in the Sheppard Maternity bill. For the public welfare your attention is called to the following facts:

Maternity Benefits was written into the Compulsory Health Insurance bill that the American Association for Labor Legislation failed to have enacted by the several States. That association was a part of the Internationale at Paris twenty years ago, inspired and financed by the Imperial German Government to weaken the morale of Great Britain, France and the United States that she might more easily conquer in the world war, says Dr. J. A. O'Reilly of Brooklyn, in the *ILLINOIS MEDICAL JOURNAL*, June 1920.

SPINSTER MIDWIFERY

The Sheppard Maternity bill centralizes in the Children's Bureau at Washington full power to direct and control in care of maternity and infancy. The bureau is to have committees in every locality without limit of number or membership. (Section 4, S1039). No doctor and no mother is named in the bill for membership, only "women." Senator Reed said in the Senate that every member of the Children's Bureau, save one, is a spinster. Hence the "women" in the ten thousand committees may all be spinsters, to investigate pregnant women and provide midwives rather than physicians.

The Children's Bureau engaged an official of the A. A. for L. L., Henry J. Harris, to write a book on Maternity Systems abroad in Germany, Austria, Russia, etc., in which appears an endorsement of the German hired head of the Bolshevik children's bureau, the crimes of which exceed crimes of the African jungle, says the Russian Information Bulletin.

Do the American people want America covered with government-financed committees of what Sen. Moses calls "Meddlesome Matties" to investigate everybody's business and card-index past histories and private affairs of every home, as

these women have card-indexed legislators to intimidate them into enacting such bills as the Sheppard Maternity bill? When such "women" shall be reorganized into local and State committees, financed by one million dollars, annually, from the U. S. treasury, and directed by law to issue and disseminate publications of their own choosing, every covetous dream will easily be achieved by them, and the U. S. treasury will be within their reach.

CENTRAL UNLIMITED POWER

The Sheppard Maternity bill is the more dangerous because of what it does not say. It gives blanket powers to the Children's Bureau and to its chief. It gives her power to form a vast machine, spreading its net over the American people. She is to be financed by \$1,480,000, and every year by one million more. This money is not to be used in providing a bed for a mother nor a bottle of milk for a baby, but in organization, administration and propaganda.

This powerful machine can be used in securing salaries; also wages for mothers and support for children until of age. Or it can be used by "the American Association for Labor Legislation and its affiliated organizations, whose interlocking directorates" Dr. O'Reilly says, "are linked with the Rand School."

SOVIET FEATURE

The Soviet feature of the Sheppard Maternity bill exceeds in importance the strong medical and social objections. It gives one woman supreme authority from the Atlantic to the Pacific and the Gulf to the Lakes. The present Chief of the proposed campaign is an endorser of feminist ideals of the unspeakable Madam Kollontai whom the Woman Patriot, quoting the Russian Information Bureau, charges with betraying Russia to Germany, and who is the one old time Russian official to be retained by the Bolsheviki.

For several years Miss Lathrop, Chief of the Children's Bureau, has published surveys, statistics and reports based in part upon excessive figures of the influenza epidemic tending to throw discredit upon American cities and communities. But these publications approve foreign systems where morbidity and mortality far exceed ours.

ILLEGITIMACY ENCOURAGED

Her literature encourages birth out of wedlock by recommendation of bonuses to illegitimate mothers.

Roosevelt's patriotism is not being inspired among our mothers by the Lathrop Bureau. Its hundreds of thousands of dollars annually spent tend to frighten young girls from becoming mothers. It induces confidence of mothers away from the family physician.

INTERNATIONALE CONTROL

The maternity bill will raise the women of this Bureau into a mighty political machine with "State" and "local" committees which the State agencies "shall" select and the Children's Bureau "shall recommend to the State agencies." (Page 4, Lines 18-25 of S 1039.) Then the American Association for Labor Legislation, the Rand School, their interlocking societies and the Communistic Internationale may expect official places for their followers and officers in the huge political machine under the authority of the United States government.

Please give these facts publicity for sake of public welfare.

Eben W. Burnstead, Secretary,
Massachusetts Civic Alliance, Boston.

DO YOUR PART TO ARREST THE HYSTERIA IN PUBLIC HEALTH LEGISLATION.

July 21, 1921.

Hon. Samuel E. Winslow, Chairman,
Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D. C.

In-Re Sheppard-Towner Maternity Bill

Dear Sir: Will you please direct your Committee's attention to the fact that in the New York campaign against Compulsory Health Insurance this very type of Socialistic legislation was threatened by the campaigners for the American Association for Labor Legislation which not only sought to betray the State of New York into wasteful cattleization of its people, through Compulsory Health Insurance, but, also, made a public, alternative threat:—

"If you succeed in defeating Compulsory Health Insurance, YOU WILL HAVE TO TAKE STATE MEDICINE" and that, in furtherance of another threat:

"If you refuse to help make operative Compulsory Health Insurance, if passed, your licenses to practice Medicine will be taken from you under the Police Power of the State."

That same organization tolerated the with-

drawal, from the present N. Y. Medical Practice Act, of the only legal bar to unbridled abortionism and birth-control (Sec. 170-D). The support of the Kenyon Medical Practice (Re-Registration) Act (N. Y. Assembly Bill 840, year 1920) by the Birth Control Leagues followed upon this betrayal of Public Decency and Social Security.

Will you please direct the attention of your Committee to the office-body of that American Association for Labor Legislation and the affiliation of many of them with the Rand School, with Socialistic and Negro-exciting magazines and other forces of Unrest which are making the post-war reconstruction problem so difficult by their Socialistic plans for making the Federal Government the distributor of largess, deliberately disregarding the fact that the Federal Government has no independent source of income but functions, solely, through money derived from imposts and taxes. There is no such "animile" as a 50-50 proposition between the State and Nation BECAUSE every penny must come from the pockets of the individual taxpayers, flowing to the Federal Treasury in constantly increasing floods and returning to the people, the GOAT, in the tiniest of rivulets, after passing through the tortuous, thirsty beds of Federal and State Patronage Sand.

I believe you and your Committee will agree that there is but one standard for these Legislative "Uplift" organizations—the more 100% Americans claimed by them, the less excuse exists for tolerating any Anti-American or Americans—BUT in their officer-body or membership. Give some attention to the Propagandists forming Maternity Stuff, my dear Congressman, and you will become suspicious of the propaganda. The foundations back of it maintain Schools of Philanthropy, Sociology and Psychology whose proteges and graduates await translation into secretaries, assistant-secretaries, social surveyors, sob-statisticians, psychologists, professional philanthropists with the "uplift urge," etc., and they ask the men we VOTERS send to represent us, in Washington and at State capitols, to make the Nation and the States PAYMASTERS of these "Welfarers" which these same Socialistic groups would control, precisely as they controlled the Bureau of Municipal Research in New York City to besmirch.

This Maternity Stuff can not be made without

Doctors, as you well know. The type of doctor who will welcome service under it is not the type of doctor you would welcome as accoucheur to your wife. Your kind of a doctor would not touch it with a fork because he is incapable of service which eliminates personal interest and makes the object of his ministrations a cattleized card—indexed—unit.

You know, in your soul, Mr. Congressman, that the time-server in medicine and religion must of necessity sacrifice his MORALE. YOU would not give him house-room when the physical or spiritual welfare of a member of your family is in jeopardy. Why, then, in the name of common sense and political decency, can practical men who have passed through the mill, and won through to the House of Representatives or the Senate, give serious thought to the Sheppard-Towner Maternity Bill?

Please, Sir, do your part to arrest the hysteria in public health legislation which began with the compulsory health insurance of Germany, was brought here direct from the Labor Internationale in Paris in 1901, by a Russian who never practiced Medicine so far as can be learned and who is now part of the Zionist Movement—which was propagandized by the American Association for labor legislation and its affiliated organizations whose interlocking directorates are linked with the Rand School, etc., . . . and which was developed and exploited under such names as Health Centers, Maternity Centers, Community Centers, Medical Practice (Re-Registration) Acts, National Socialization of Medicine (Public Welfare Department), etc., "YOU CAN NOT GET FIGS FROM THISTLES" and you can not expect CONSTRUCTIVE legislation to proceed from such a source.

Sincerely,

JOHN J. A. O'REILLY, M. D.
405 Union Street, Brooklyn, N. Y.

COMPETING FOR A LIVELIHOOD WITH AN INSTITUTION WHICH A DOCTOR AS A TAXPAYER IS HELPING TO SUPPORT

PHYSICIAN DEPLORES STATE COMPETITION

To the Editor: It is with interest I read in a recent number an editorial entitled "Disappearing Country Doctors," and a few days before this a news item in which Dr. Cabot, dean of the University of Michigan Medical School, is reported as advocating that the University hospital be empowered to charge

fees to patients and treat the well-to-do as well as the indigent.

Your editorial deplores the situation in which the country doctor is disappearing. The cities are not any too well supplied with physicians during periods of the year in which sickness is more or less prevalent; and the cause is not far to seek. The outlook for the medically trained doctor is not good; consequently fewer men are entering the profession each year.

No other professional calling exacts the high standard that medicine does. With a preliminary academic training of full high school course and a minimum of two years university work, with five additional years' training in a medical college to which is added one to two years hospital internship, the opportunity for earning a livelihood is deferred until the young man contemplating medicine is well into his thirties. This means about 12 years of hard work with more or less spending for fees, board and clothing and no opportunity to earn.

When at last the physician has fulfilled all requirements exacted by the state and has opened an office he finds himself in competition with the irregular healing cults of whom the state exacts practically no medical knowledge nor training.

And last, but by no means least, if the young physician chooses to locate in Michigan he has to compete with the medical department of the University of Michigan of which Dr. Cabot is the chief. In spite of the fact that in the past the University hospital was supposed to look after only those unable to pay for medical attention, very few physicians in the state of Michigan have not felt its competition in the treatment of people who were well able to pay for their medical attendance. What other calling would possibly submit to such competition on the part of the state?

Dr. Cabot, as reported, advocates that the new university hospital be thrown open to all classes irrespective of their financial standing. It is only natural that preference will be given to patients of means rather than to the indigent poor, accordingly, the young medical graduate will find himself competing for a livelihood with an institution, which he as a taxpayer is helping to support.

One hospital in Detroit, which is closed up tight so far as the medical profession of Wayne county is concerned, has advertised that no charity cases are taken. These cases, together with the indigent that the University of Michigan hospital cannot care for, will be left for the vanishing country as well as city doctors.

When one considers the amount of time, hard work and money required to obtain a medical education, with no protection against charlatans on the one hand, and subsidized state competition on the other, is it any wonder that country doctors and city doctors as well tend to decrease in numbers?

J. H. DEMPSTER,

Vice-President Wayne County (Michigan)
Medical Society.

August 9, 1921.

Society Proceedings

COOK COUNTY

THE CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, January 3, 1921, at the Palmer House.

The President, Dr. Alfred Lewy, in the Chair.

PRESENTATION OF CASES AND INSTRUMENTS:

Dr. Otto J. Stein presented the specimen of a teratoid tumor of the floor of the mouth, which he had removed from a patient presented two months previously. Dr. Stein had been asked whether the condition was common or rare as seen by throat specialists. At the time this patient was presented he had seen only two cases but had since seen a third case, the specimen from which he also exhibited.

Scientific Program:

Dr. Norval H. Pierce presented a paper entitled "The Normal and Pathological Pneumatization of the Temporal Bone—A Review" (with lantern slides).

AUTHOR'S ABSTRACT

The work which we are to review was published in 1918 and consists of two volumes,—one a volume of text containing 296 pages; the other a volume of illustrations of 111 photographs of serial sections on which the conclusions of Wittmaack were based. The work was begun about twelve years ago when Wittmaack began to accumulate his anatomical material for the investigation of cholesteatoma.

Up to the time of the appearance of Wittmaack's work anatomists divided the pneumatic portion of the temporal bone into three normal types: (1) The pneumatic mastoid, (2) the mixed form, in which the pneumatic structure was more or less equally divided with the spongy structure of the bone, and (3) the compact mastoid in which few or no pneumatic cells were present. Variation in the pneumatic structure was not in any way regarded as the result of disease.

He accepts the mode of pneumatization as described by Strasser and his school in their studies of the pneumatization of the skeletons of birds and in the pathological processes he draws upon the work of such men as Bezold, Siebermann, Toubert, Moure, Canapele, Lombard, Kanasugi, Preysing, Görke, Reitschel and others. He divides the normal pneumatization of the temporal bone into three stages.

His conclusions are that the development of pneumatic systems in the temporal bone, (that is, the tubal cells, the tympanic cells and the mastoid cells) under normal conditions takes place with far greater regularity that has heretofore been believed. The normal structure of the pneumatic process even in the advanced age is characterized by a widespread pneumatization and not by a sclerosing process. The arrest of the formation of the pneumatic system in later life, that is, after the fifth year, is not a manifestation of peculiarity of the mastoid as a whole but only as an interference in the peripheral structure of the pneumatic system. He recognizes but one type of normal mastoid and that is one in which complete

pneumatizations occur. The presence of spongiosa is a sign of arrested development.

He reasons that the cause of this arrested development must primarily be searched for in the middle ear mucosa, the osseous structures evidently playing a secondary part in the process of pneumatization. It has been known for a long time that the middle ear of the newborn and sucklings is subject to a peculiar inflammatory process which has been known as the otitis media of the newborn. It is latent in its character and course and is discovered most frequently at the postmortem table. According to Solowzow, over ninety per cent. of all newborn children and infants are subject to this inflammatory process in the middle ear. Preysing, Görke and Rietschel have extensively investigated this form of otitis media. The frequency with which it is found in children or infants rendered it difficult for Wittmaack to secure a large number of undoubtedly normal temporal bones in the first year of life. He concludes from this that the process is not physiological but is undoubtedly a pathological condition, and this view is supported by the presence of pus in the cavities of the middle ear and the known anatomical changes in the mucosa. These anatomical changes have been especially studied by Görke and Rietschel and they agree that there are two definite types, a plastic and an exudative form, and Wittmaack suggests as a result of his investigations that these may be divided into a latent insidious type and an acute form with a relatively rapid course. How this can affect the pneumatization will appear later.

The cause of this latent, symptomless, insidious form of inflammation was ascribed first by Aschoff to the aspiration of amniotic liquor, vernix or meconium into the tube and then into the cavum. The pollution of the cavum with amniotic liquor is, according to Aschoff, the cause of the presence of leukocytes in the cavum of the newborn. According to this view otitis media neonatorum is not an infectious process but rather a reaction to a foreign body. It does, however, according to Hartmann and other authors, render the structures more disposed to bacterial invasion. Preysing in a great number of all ears which he examined in the newborn found an exudate which was sterile. Among the infected cases the pneumococcus was by far the most frequently found. The changes wrought by the inflammatory process in the mucosa are characterized by a more or less intensive infiltration of the superficial layers of the mucosa and the epithelium with round cells, dilatation of the blood cells and production of an exudate containing more or less pus corpuscles. The epithelial strata is changed to an extent that the ciliated epithelium (forming the tube) is found in places far removed, in the recessus and even in the antrum, areas in which the ciliated epithelium is never found in normal conditions. Wittmaack has proven by experiments on the lower animals—rabbits, cats, etc.—by his production of a purulent inflammation in the ear that he can produce a spreading of ciliated epithelium.

The normal epithelium of late fetal or early infant

life in the cavum is cuboidal in character which changes under normal conditions to the epithelioid type. The persistence of the cuboidal epithelium and the pressure of ciliated epithelium Wittmaack regards as a mark of pathological changes, and the persistence of the cuboidal and ciliated epithelium coincides with other evidences of pathological conditions in the arrest of pneumatization to a degree that suggests that his views are correct. Moreover, the abnormal epithelial types are not present in normal pneumatization. There can be no doubt that in the presence of the inflammatory process under consideration the superficial layers of the mucosa and the deep subepithelial myxomatous tissue shows no tendency to regression but, on the contrary, displays a tendency to thicken. Wittmaack believes that a normally developed mucosa cannot be differentiated into various layers and when this is possible it is due to disease.

We have, then, not only persistence, more or less complete, of the embryonal subepithelial myxomatous tissue, but also a proliferation of the same. We have then an exquisitely hyperplastic mucosa rich in blood vessels. Another change which is characteristic of this condition is the formation of granulation nodules.

The point is made by Wittmaack that this inflammatory process causes the arrest of the recession or disappearance of the myxomatous embryonal tissue. This occurs in a very irregular manner, depending largely upon the inflammatory intensity at a given point. It can be readily understood how bridges of membrane, adhesions, strands, etc., may thus be formed by an incomplete resorption of this myxomatous tissue especially in the recessus epitympanicus and about the foot plate of the stapes. Granting that the inflammatory process causes the persistence of the thick subepithelial portion of the mucosa largely derived from the former myxomatous tissue, and remembering the manner in which the epithelium follows the myxomatous tissue into the marrow spaces of the bone, it can be understood how the process of pneumatization is arrested.

He concludes, first, divergences from the normal structure of the mastoid depend without exception upon typical processes which produce changes in the character of the mucosa in the first and second years of life.

Second, the changes in the character of the mucosa may be grouped under the hyperplastic and fibrous types.

Third, the hyperplastic types develop from a latent insidious plastic inflammatory process in the mucosa.

Fourth, the fibrous type depends on an acute exudative inflammatory process.

Fifth, whether disturbance of the pneumatization is partial or complete depends upon the intensity of the changes in the mucosa.

Sixth, every type of disturbance of pneumatization gives a typical structure picture of the mastoid.

I. Complete arrest of pneumatization.

a. By hyperplastic.

b. By fibrous mucosa.

II. Partial arrest of pneumatization.

- a. In the hyperplastic inflammation (severe, intermediate and light grade.)
- b. By fibrous mucosa (prolonged pneumatization.)

Seventh, the concurrence of hyperplastic with fibrous changes in the mucosa occurring with relative frequency lead to mixed forms of peculiar structural types, sometimes with one and sometimes the other component predominating.

In summing up the relationship which arrested pneumatization bears to the other parts of the temporal bone we find:

1. There undoubtedly exists a certain relationship between, pathological pneumatization and certain anomalies of the tympanic membrane, lustrelessness, cloudiness, atrophies, etc.
2. Changes in the tympanic membrane cannot be regarded as always constant accompaniments of pathological pneumatization.
3. In entirely normal pneumatized temporal bones we find only the constant ligaments in the epitympanic space. The development of accessory folds is a sign of pathological pneumatization.
4. The displacement forward of the sigmoid sinus is found in pathological pneumatization. The higher grades of displacement occur only in the worst form of disturbance of pneumatization.
5. The persistence and unusual breadth of the fissures is an accompaniment of pathological pneumatization.

It is apparent that the work of Wittmaack explains many hitherto unexplained problems. It explains, for instance, the so-called chronic catarrhal otitis media which arises from apparently no cause and which has been explained on the hypothesis of diathesis or a catarrhal inflammation. It explains the chronic tubo-tympanic inflammation, or at least places these conditions in an entirely new light.

The more important conclusions as regards the relation of arrested pneumatization to inflammatory disease of the ear may be summed up as follows:

- I. Practically all severe forms of inflammatory middle ear involvement develop in temporal bones with pathological pneumatization in so far as this depends on continuous extension from the tube.
- II. Chronic middle ear suppuration exists on the basis of complete arrested pneumatization, or the severest forms of disturbance of pneumatization, with markedly hyperplastic mucosa in the child;
 - A. Chronic suppuration of the mucosa on the ground of the acute exacerbations of the suckling.
 - B. The chronic cholesteatoma suppuration, either (a) after acute necrotizing otitis through ingrowth of the epithelium in consequence of large peripheral defects of the tympanic membrane, or (b) as an insidious process with intact *pars tensa* after sequestration of the antrum recessus from the cavo-tubal cavity in consequence of adhesions from Schrapnell's membrane, or an atrophy above, or adhesions above or below the posterior folds; (c) middle ear suppuration with epithelization or combination recessus cavum and cavum cholesteatoma suppuration and a

combination of the process which leads to cholesteatoma formation.

III. The form which the chronic suppuration and its course pursues is preordained by the anatomical changes within the several cavities of the middle ear before the appearance of the clinical symptoms. Also, the secondary and end processes, such as the extent of perforation, epidermization, polyp formation, scarring, etc., depend upon a preformed anatomical substratum.

IV. The acute middle ear suppurations develop with predilection in medium and lighter grades of disturbance of mucosa and corresponding character of the mucous membrané.

V. The greater the hyperplasia, the thicker the epithelium, and the less the pneumatization, the greater is the tendency toward the occurrence of acute inflammatory processes which run a protracted course, and the less, on the contrary, is the tendency to mastoiditis and vice versa.

VI. The character of the secretion in an acute otitis media stands in direct relationship to the character of the mucosa. Thick, highly hyperplastic mucosa with ciliated epithelium is especially apt to produce a mucous or mucopurulent secretion. Slight hyperplasia with flat epithelium gives thick, purulent, tenacious secretion. Fibrous changes predispose to a thin fluid, serous or seropurulent secretion.

VII. Frank mastoiditis occurs most frequently in normally pneumatized temporal bones when infected in acute middle ear disease.

VIII. Middle ear inflammations of tubercular and luetic character exist on the anatomical hyperstrata of the mucous membrane and its accompanying disturbance of pneumatization. Their course depends also on the particular character of the mucosa as it occurs in arrest or disturbance of pneumatization.

The relation which pathological pneumatization bears to endocranial complications is most interesting and important. In the illustrations you will find how frequently abnormal vascular communications persist between the abnormal mucosa, the meninges, the bulb of the jugular and the sigmoid sinus.

It would be impossible to give a complete account of the monumental work performed by Wittmaack. We must be content with this short and incomplete sketch.

Before closing I must, however, accentuate the very kernel of Wittmaack's deductions, namely, that nearly all inflammatory diseases of the middle ear, in their genesis, nature and course are dependent in certain anatomico-developmental changes in structure of the mucosa and osseous structures of the ear. Most of these alterations in structure are caused by a latent, insidious, inflammatory process which occurs in early life. In other words, if in late life an individual develops middle ear inflammation (catarrhal) with adhesions, fixation of the stapes, etc., or the special suppurative type of inflammation is predestined when the occasional cause arrives by the changes which have occurred in the first years of that individual's infancy. On this fundamental principle he has erected a plausible, logical structure which must be proved or

disproved by future investigations. True, there are discrepancies and here and there we discover findings and conclusions which are susceptible of quite different interpretations, but on the other hand he throws light on many dark corners of otology and explains in a logical manner many points of pathogenesis, which have heretofore been merely surrounded with meaningless words.

DISCUSSION

Dr. J. Holinger expressed his appreciation to Dr. Pierce for having given such a clear insight into Wittmaack's work. Dr. Holinger did not know whether Dr. Wittmaack explained all cases of cholesteatoma on the basis of abnormal pneumatization. He remembered two cases. The first was a man of 36 years, where a cholesteatoma developed under his eyes from a normal drum-head to the complete pathological picture. The second case did not go quite as far as to have the cholesteatoma finished, but the retraction of the membrane into the antrum, which would lead to it, was clearly due to a scar on the orifice of the eustachian tube.

Dr. Joseph C. Beck was sure everyone appreciated the pioneer work of Professor Siebermann in otosclerosis and yet were interested in the heated discussion between Siebermann and Manasse and the former's opposition to Manasse's opinion on otosclerosis, and Manasse has many adherents at present. He had seen Wittmaack in Europe, as a student, and had then the impression that he did not know much more than the others, but his work that had been shown by Dr. Pierce, as well as other studies formerly brought out, promised for Wittmaack big things, especially so from the pathological point of view in such diseases which had not been relieved by previous treatment as, for instance, adhesive processes of the middle ear. The sad part in Wittmaack's work as presented by Dr. Pierce was the inability of prevention of this infant spongy process in the ear. This last work of Wittmaack's was a stimulation for Dr. Beck to go over his microscopic specimens of infant and children mastoid chips again and take what he had thought, from a histological point of view, to be exudate in the mastoid cells and see if it was not this embryonal tissue which he had probably not stained as carefully as Wittmaack.

Dr. Beck thought he could speak of between 500 and 2,000 x-ray pictures of the mastoid taken stereoscopically, in regard to pneumatization. These were made in all possible conditions in children, and he was sure that if pneumatization had been inhibited as mentioned by Dr. Pierce the percentage was too high because most of the x-rays examined up to five years have been found to have large pneumatized mastoids, usually present on both sides. Many of the children had conditions due to otitis media and adenoids, which should have arrested the pneumatization, as stated by Dr. Pierce. If the arrest was due to such tissue changes why would it not stop pneumatization sooner?

Another point was the pneumatization of the adult mastoid. Dr. Beck had studied the large pneumatization mastoids and found them having the dumb-bell contraction in and about the antrum mastoidei which was usually diploic in character. If pneumatization occurred, as it was shown by Dr. Pierce, from the antrum outward, how did the pneumatization take place peripherally as can be shown in the x-ray or account for the repneumatization of the pathological mastoid, that is, a mastoid acutely infected and subsequently undergoing resolution?

The speaker felt that Dr. Pierce should have the thanks of the society for bringing the work before them and was convinced that the translation of Wittmaack's work would be of value because it was something in the hope of a new era for otology.

Dr. Alfred Lewy thought that in so widespread an affair as was described by Dr. Wittmaack, one would think of a failure of development, due to some systemic rather than local process. If this disease is found in so high a percentage of sucklings as is claimed by Wittmaack, one would naturally expect a much higher percentage of deafness in children. Our

observation of disturbances of hearing in children from causes in fetal life is very inadequate, so Wittmaack's statement, if correct, will explain many cases of deafness in which no inflammatory action has been noticed.

Dr. Lewy asked if any specialized epithelial cell on the order of an osteoblast had been described as causing the erosion or pneumatic spaces. He had found no mention of it in the book.

(To be continued)

MADISON COUNTY

Our June Meeting.

The Madison County Medical Society met at Godfrey on the afternoon of June 3, 1921, with President Dr. E. F. Wahl in the chair. Twenty-eight members and forty visitors were present.

On motion made by Dr. Smith and carried the secretary was instructed to send Emelie Herman, of Collinsville, Henry Marcum of Granite City and Mary Michalek, of Livingston, to St. John's Sanitarium, at Riverton at the expense of the Society. Also to provide necessities of life to two men at Livingston, if found advisable. The secretary announced the receipt of a voucher for \$100 from the Madison County Chapter of the Red Cross to be used in our tuberculosis work. On motion duly seconded and carried it was ordered that our next meeting be held at the Alton State Hospital on July 8, instead of the first Friday in July.

It was reported that Dr. F. W. Kerchner, of Glen Carbon, was at St. Mary's Hospital, East St. Louis, as a result of an accidental injury to his knee and the secretary was instructed to convey to him our sympathy in this affliction and to send flowers.

The death of Mrs. Clarabel Glauner, wife of Dr. F. E. Glauner, of Marine, being announced, the chair appointed a committee on resolutions consisting of the following members: Drs. Burroughs, Hastings and Fiegenbaum.

The report of the Community Nurse was read and ordered filed. The Committee on Resolutions on the death of Dr. S. T. Robinson, brought in a report which was adopted. Dr. W. H. C. Smith gave a detailed account of his observations on the recent Sanitarium Pilgrimage.

Dr. E. F. Wahl presented the annual president's address on "Organization." It was a well written paper and was sent to the ILLINOIS MEDICAL JOURNAL for publication.

Dr. Mather Pfeifferberger, our State Delegate, gave a report of the recent session of the Illinois Medical Society which contained many points of interest.

Dr. I. D. Rawlings, Directors of the Department of Public Health, of Springfield, read a paper on "Communicable Diseases," in which he called the attention of the members to the present deficient condition of the state in respect to vital statistics, and asked for better co-operation in the future.

A vote of thanks was extended to the distinguished speaker for his efforts and his message.

Elegant refreshments were served bountifully by

Dr. and Mrs. Smith and they received a hearty vote of appreciation for their generous hospitality.

Our July Meeting

The Madison County Medical Society met at the Alton State Hospital, Alton, Ill., on July 8, 1921, President Dr. E. F. Wahl in the chair and twenty-seven members and thirty-two visitors present.

The minutes of the last meeting were adopted as printed in the *Madison Country Doctor*. Our August meeting will be held at Highland on the first Friday in August.

The committee on resolutions on the death of Mrs. F. E. Glauner made a report which was adopted.

Dr. W. H. C. Smith, member of the Board of Trustees, of the County Sanitarium, announced that a dispensary for the care of tuberculous patients would be opened during the current month in Alton.

The report of the community nurse was read and ordered filed.

The secretary announced the receipt of \$2.50 from Dr. Burroughs, the balance of the sale of Red Cross Seals. Also the receipt of \$100.00 from the Madison County Chapter of the Red Cross, to be used in our tuberculosis work.

On motion of Dr. M. W. Williamson, of Alton, the secretary was instructed to send to the sanitarium at Riverton, Mrs. Geo. F. Clark, of Alton, at the expense of the society.

Rev. Chas. R. Carlin, of Alton, delivered an address on "Leadership in the Modern Age." It was well received and gave every evidence of thoughtful preparation. He was given a vote of thanks and it was ordered that the address be sent to the ILLINOIS MEDICAL JOURNAL for publication.

Nice refreshments were served by Dr. Geo. A. Zeller, superintendent of the hospital, and he was given a rising vote of thanks for his genial hospitality.

Adjourned to meet in Highland on the first Friday in August.

OGLE COUNTY

The regular July meeting of the Ogle County Medical Society was held in the Chamber of Commerce at Rochelle, July 20, 1921, at 1:30 p. m., the president, Dr. W. E. Kittler, in the chair. Fourteen members and eight visiting friends were present.

The following officers were elected: Dr. W. E. Kittler, of Rochelle, president; Dr. J. C. Akins, of Forreston, vice-president; Dr. J. T. Kretsinger, of Leaf River, secretary-treasurer; legislative committee: Drs. L. A. Beard of Polo, T. McEachern of Rochelle and H. H. Sheets of Oregon; delegate to State Society, Dr. R. E. Stevens of Rochelle; alternate, Dr. G. S. Henderson of Holcomb.

Dr. Herman Brennecke, Aurora, gave an excellent talk on "Treatment of Fractures." An able discussion followed by several members. Dr. Chas. C. O'Byrne, Chicago, who was on the program for a lecture on "Surgical Diseases of the Liver and Gall Bladder," failed to be present at the meeting. Dr.

E. V. Smith, Rochelle, and Dr. Luther S. Hall, of Byron, were voted in as new members of the society. Motion made by Dr. Beveridge that a rising vote of thanks be tendered Dr. Brennecke for his excellent paper carried unanimously. Motion made by Dr. Beard, by rising vote, that Drs. Brennecke, Miller, Lichty, Tuite, Pool and Weld be made honorary members of society—carried. Motion made by Dr. Akins that the next regular meeting be held at Forreston—carried. No further business to come before the society, meeting adjourned to meet again on the third Wednesday in October, 1921.

DR. J. T. KRETSINGER,
Secretary.

PIKE COUNTY

The Pike County Medical Society met in Barry, July 28, 1921, with a good attendance, eighteen physicians being present.

After a fine chicken dinner, which Barry doctors know about, the session was called to order in the G. A. R. hall by President Dr. H. J. McConnell of Baylis. Dr. O. H. Berry of New Canton was elected to membership.

Dr. Elizabeth Ball of Quincy read a very instructive and scientific paper on "Foot Problems." This was discussed by six or eight of the members at length and was declared entirely practical.

Dr. Grant Irwin of Quincy read a timely and thoughtful paper on "Rectal Diseases and the Family Physician." This received much discussion and many new points were brought out that simplify every-day treatment of these diseases. Dr. Guss of Hannibal, Mo., a visitor, reported a case of tetanus cured by the injection of 30,000 units of anti-tetanic serum in ascending broken doses. Society adjourned at 4:20 p. m.

W. E. SHASTID,
Secretary.

RANDOLPH COUNTY

Society met in Tourist Park at Chester on Aug. 19. Thirteen members present.

L. J. Meurer of Evansville was present and was formally admitted to membership.

Dr. Hugo Schroeder and wife of Granite City were present and Dr. Schroeder made a very much appreciated talk of conditions in his home city and county.

This meeting was one of the society's summer banquet meetings and a very enjoyable and sumptuous repast, prepared and served by members' ladies, was much enjoyed by all.

On account of time no regular program was had and unfinished business and informal talks filled all the time.

A vote of thanks was given members' wives and Chester physicians for their delightful lunch and entertainment.

Adjourned to meet at call of president and secretary at Red Bud.

J. W. ROBERTSON, President.
L. J. SMITH, Secretary.

Marriages

John Garfield Frost to Miss Mae LaNell, both of Chicago, June 29.

Samuel A. Myers, Urbana, Ill., to Mrs. Myrtle Crays of Sidell, Ill., at Chicago, June 20.

Personals

Dr. Ira C. Copelan, Springfield, has been appointed as chief of the division of social hygiene to succeed Dr. George G. Taylor, who recently resigned to accept full-time duty with the U. S. Public Health Service.

Dr. Royal L. Eddington, Lacon, was recently elected president of the board of education, District Number 80.

Surgeon Leon M. Wilbor, reserve, U. S. Public Health Service, has been placed in supervisory charge of both the Marine Hospital and the Jackson Park Hospital, Chicago, until such time as the transfer of patients in these institutions has been effected.

Dr. and Mrs. John H. Siegel and son Vivian, of Collinsville, are back home again after a delightful vacation spent at Les Cheneaux, Michigan.

Dr. and Mrs. R. D. Luster of Granite City left on August 10 for a motor trip through the west. They will be gone seven weeks.

Dr. and Mrs. H. C. Tietze, of Livingston, attended a reunion of the Tietze family at West Salem, Ill. This was the first gathering of the Tietze family in twenty years.

Dr. and Mrs. A. F. Kaeser, and daughter Marian, of Highland, spent a part of last month on an outing in Wisconsin.

Dr. and Mrs. L. C. Harlan, of Madison, are spending their summer vacation in the lake region of Minnesota.

Dr. Lay G. Burroughs, of Collinsville, attended the Burroughs family reunion for the last two weeks, back at the old plantation homestead in Maryland.

Dr. and Mrs. E. F. Wahl, of Edwardsville, spent the greater part of August in the Ozarks. They floated down the Current River, fishing from the canoe and camped on the banks of the river at night.

News Notes

—The Peoria County Medical Society held a largely attended meeting August 11, at the sanitarium of Dr. George Michell. In the morning Dr. Gaston Labat, French authority on local anesthesia, demonstrated his methods at St. Francis Hospital, and, after the outdoor meal at the Michell farm, gave an address on "Local Anesthesia." Various contests were staged for young and old in the afternoon, and in the evening music furnished the ending for a perfect day.

—The following resolutions have been adopted by the Belleville branch of the St. Clair County Medical Association respecting the death of the late Dr. L. J. Bechtold:

Whereas, It has pleased Almighty God to remove from our midst our confrere, Dr. L. J. Bechtold; and

Whereas, Dr. L. J. Bechtold was for 50 years an honorable and leading practitioner of St. Clair County, practicing his profession to the very last minute of his life. Therefore, be it

Resolved, by the Belleville Branch of the St. Clair Medical Society, That in the death of Dr. L. J. Bechtold the Society has lost one of its most prominent and leading members; the profession at large a colleague wise in council and ethical in his dealings with his fellow-practitioners; his clientele, a conscientious physician devoted to their best interests; his wife, a loving and model husband, and his children, a kind and sympathetic father; be it further

Resolved, That we extend to the bereaved family of Dr. L. J. Bechtold the heartfelt sympathy of every member of our Society in their great sorrow; and be it further

Resolved, That a copy of these resolutions be presented to the family and that they be spread on our minutes.

C. G. RAYHILL,

B. H. PORTUONDO,

A. HANSING.

—The Iowa and Illinois Central District Medical Association held its annual meeting at Outing Club in Davenport, August 25.

—Quarters for crippled children, that were recently opened in connection with the St. John's Sanatorium, located at Riverton, have been filled to capacity. In all there are forty-two children who are now under treatment there.

—Four hundred members of the North Side

Branch of the Chicago Medical Society were the guests, August 16, of Culver Military Academy, at an outing held at Lake Maxinkuckee, Ind. The day was devoted to sports, one feature being an old-fashioned "hurry-up call" contest, in which each physician was required to harness a horse to a buggy and go to a fictitious patient.

—The maximum limit of 1,000 entries for the sixth annual Better Babies Conference, to be conducted by the state department of public health in connection with the state fair at Springfield, was reached by noon Friday, August 12, the last day of the period set for receiving applications. This represents the greatest number of entries ever filed by the department and indicates the phenomenal growth of the better baby conference movement in Illinois.

—Candidates at the June state examination for physicians' licenses were required to take a second test August 30-31, on account of the sale of questions given at the June examination. The discovery of the sale is said to have been made by the State Department of Registration and Education through confession of department inspector, Cassius Erler.

—Baby clinics held at St. Francis Hospital, Kewanee, are becoming more popular with mothers who bring their infants in increasing numbers for examination and advice.

—The Open Forum of the Mt. Vernon Chamber of Commerce held last month studied the tuberculosis situation. By popular vote the county had voted \$18,000 for the construction of a sanatorium—an inadequate amount for the purpose. The question under consideration was whether the money could be used for salary of nurses to begin immediate work along the line of prevention. Mr. Becker, director of the Illinois Tuberculosis Association, said that a two-mill tax was not sufficient for construction and maintenance of a sanitarium except in the larger and wealthier counties.

—At a meeting in Albion last month the Edwards County Tuberculosis Association was organized with Dr. Ross L. Motor as president.

—An epidemic of typhoid fever in Freeport early in August was traced to cases on the dairy farms supplying one of the milk dealers.

—The 89th Division Medical Association will hold its second annual reunion October 28, in Kansas City, Mo.

A DOCTOR OF THE OLD SCHOOL

I can see him still as in the long ago, with his beard, so long and white as snow, hanging two feet below his chin; and the hair on his head was white and thin.

His face! A face beloved by all, a forehead broad and grand and tall, the sparkle of life in his deep blue eyes, to look into them was to realize that the soul within was great and good; kindness and charity he understood, stooped were his shoulders and frail his frame; Old Doctor Marshall—that was his name.

Our old family doctor—everybody's friend, always ready his helping hand to lend, simple were his manners and gentle his ways, a little old fashioned as they say now-a-days.

But he gave to all the best he had, and many are the hearts that he made glad. He was all that was noble and great and grand, yet so humble a servant that all could command; the rich, the poor were alike to him, and not to answer a call he deemed a sin. His work he held sacred, his calling high, as I now see his goodness methinks you and I might well emulate him, his kindness and beauty by mixing his virtues with our own daily duty.

He lived true to his calling, God's worthy tool, for he was a doctor of the old, old school.—ARTHUR G. BOSLER.

Deaths

BARTHOLOMEW BANTLEY, National Soldiers' Home, Danville, Ill.; Rush Medical College, Chicago, 1886; assistant surgeon, National Home, Milwaukee, 1900-1921; Civil War veteran, and later served in the regular army; died, August 10, following several surgical operations, in the general hospital of the home, aged 73.

FREDERICK GRAVES, Hinkley, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1881; died in Tennessee, July 19.

NATHANIEL N. HURST, Chicago; Jefferson Medical College, Philadelphia, 1873; died, July 25, from heart disease, aged 75.

JEFFERSON G. HUTSON, Carriers Mills, Ill.; American Medical College, St. Louis, 1896; died, August 9, at the Crane Hospital, West Frankfort, following a nervous collapse, aged 60.

CHESTER ST. JULIEN MACBETH, Chicago; Northwestern University, Chicago, 1917; specialized in surgery and roentgenology; died, July 13, aged 35.

MARTIN GRACE MEEHAN, Chicago; Rush Medical college, Chicago, 1885; member of the Illinois State Medical Society; died, July 24, from cancer of the gallbladder, aged 70.

THOMAS J. PARKER, Chicago; Western University, London, Canada, 1892; member of the Illinois State Medical Society; died, August 6, from cerebral hemorrhage, aged 56.

GEORGE BRINTON THOMAS, Bismark, Ill.; Bennett Medical College, Chicago, 1914; served overseas in the M. C., U. S. Army, during the World War; was killed when his automobile was struck by a train at a road crossing near Bismark, Ill., July 8, aged 42.

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Original Articles

EARLY NEUROLOGIC FINDINGS IN PRIMARY ANEMIA.*

FRANK GARM NORBURY, A. M. M. D.
JACKSONVILLE, ILL.

It may be of interest to follow the train of thought that leads to the development of a subject such as this. The conception may be divided into three phases; the early one in which the laboratory findings of blood changes receive the greatest emphasis, then the group where clinical features with more generalized symptoms and signs are stressed, third those cases in a clinic where people with nervous or psychiatric conditions make up the major initial complaints. Working backward along these stages, correlating them in so far as possible for the individual case and for the condition as a whole led to an interest in the attempt to subject cases of pernicious anemia to an analysis from the neurological symptoms and signs, confirmed or refuted when all the material of history and examination is at hand for diagnosis.

More and more attention has been paid in recent years to these neurological findings associated with primary or pernicious anemia. The more marked changes have been noted as far back as Addison's original monograph published in 1855 on the "Constitutional and Local Effects of the Diseases of the Suprarenal Capsules."¹ Biermer² whose name is linked with Addison's in the Addison-Biermer type of anemia also spoke of nervous symptoms though he considered what he called "the ordinary anemia nervous symptoms."

Other earlier workers noted the nervous system involvement in clinical or pathological findings. It remained for Lichtheim³ in 1886 to formulate the first significant correlation of spinal cord degeneration with pernicious anemia.

The Lichtheim areas of degeneration are well known landmarks in the neuropathology of these cases. An increasingly developing literature has grown up about the neurological findings in which the names of Taylor and Putnam, Dana, McCrae, Cabot and Barker show the interest of men of this continent in them.

The frequency of nervous system involvement where studied is constantly high. Minnich³ in 1892 showed 70 per cent of the cases studied to have pathologic changes in the cord. Billings⁴ report of 1900 showed clinical and pathologic evidence of this in 41 cases. Cabot⁵ states that 84 per cent of the 82 autopsies in his series of 1200 cases gave nervous system changes. Mix⁶ estimates 60 per cent of cases show definite spinal cord involvement. That these changes are of the whole nervous system and not of the cord alone is well known though of more recent development as regards the detailed neuropathology. The reports of Barrett, Woltmann, and Lurie discuss the cerebral lesions and psychic manifestations from clinical and pathological standpoint.

The description of neurological findings by Woltmann⁷ in his report on 150 cases from the Mayo Clinic is of greatest value and interest in relation to the subject of this paper. He found that 80.6 per cent of this series showed definite neurological findings. It is of still more interest here, however, that 12.7 per cent of them came to the clinic specifically on account of symptoms of a neurologic nature.

Before taking up these earlier findings in the central nervous system it would be well to inquire a little into what we know of the causative factors. Why are these signs so constant? The answer to this must be the same as that to what has been usually considered the predominant feature, the blood changes, namely that the etiologic factor is unknown. While a great deal is known of these blood changes, of the pathological findings including those in the nervous

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system, of the course of the disease, tendency to remission, etc., the cause of it all is as yet undiscovered. The association of bothriocephalus infection with certain cases of grave anemia is too well known to need discussion here. Paranthetically it may be remarked that neurological changes such as those seen in pernicious anemia are found in some of these cases; while secondary anemias of other types no matter how severe do not show them.

It is not within the province of this paper to deal with the numerous and various theories and hypotheses that have been suggested for the cause of pernicious anemia especially since the etiologic factor being unknown we would be delving into fields of speculation. However, we do wish to present the theory as given in the majority of recent reports. We quote from Lurie⁸ as follows: 1. One toxin causes both blood and central nervous system changes. 2. This toxin acts independently on the blood and central nervous system. 3. As soon as the typical blood picture of pernicious anemia develops and persists for a considerable length of time the metabolism of the nerve cells is so impaired that the changes which were purely functional at first and due to the irritating action of the toxin alone now become organic and permanent.

The nature of this toxin is of course the goal of investigations. Clinical and experimental evidence has been brought forward to show that it is (a) derived from decomposition products of intestinal contents, (b) bile salts, (c) toxic products of septic infection in the body, and (d) endocrine disturbances and inbalance of secretions produced thereby.

The theory as above outlined explains best those cases in which neurological findings appear definitely before blood changes or appear coincidentally with them, but before the anemia has gone so far as to "impair the metabolism of nerve cells" and in that way bring about further signs of nervous system involvement.

These neurological findings in the first group are really the important ones from the standpoint of both patient and physician because even though the general attitude usually is that a diagnosis of pernicious anemia means a fatal outcome nevertheless the earlier the patient is seen

the more can be done for him. Especially is this true with our greater understanding of septic infection and absorption of toxing therefrom having something to do with many if not most cases. Ochsner at the Mississippi Valley Medical Association meeting in Chicago last fall cited very favorable statistics in the treatment of cases from this angle.

The most important early neurological finding is more or less constant paresthesia. Woltmann found it as numbness and tingling of the hands and feet, sensation of cold, etc. in 80 per cent of all cases. Our findings in a relatively brief series of 30 cases would seem to indicate its presence in all of them. To be sure, numbness and tingling, the feeling of the hand or foot being asleep is a condition that we all have probably experienced temporarily due to position, cramping, pressure, etc., but this is explainable by one of these or other reasons. The importance is in the constancy of the symptoms which can not be explained by local causes and which on neurological examination is not found to be due to some other underlying factor.

Other types of paresthesia are given in detail by Woltmann some of which are quite striking such as the complaint of "feeling cold all the time as though a draft were blowing on them," and of "legs feeling like sticks." This latter is a particularly apt description. Three of our patients have described feeling as if their feet were on a pincushion, yet on questioning did not give the more usual statement of "pins and needles" but said the sensation was more like having the blunt rather than pointed ends of pins on the skin. The "all gone yet preeminently conscious feeling" in the hands and feet was the more rhetorical description of another's sensations.

It is of importance of course in the description and recognition of symptoms of the paresthesia group to rule out those in which a hysterical origin might come up. Careful analysis and correlation, especially of the mental element, is to be carried out here. The occurrence of paresthesia can be described more as belonging to the early stage of irritation, hence its importance.

The next important finding, and which is of objective nature, is that of disturbed muscle joint sense. Mix states that "nearly every case will

show enough interference with the columns of Goll and Burdach to have lost the keen accuracy of response to the muscle and joint sense." Woltmann gives 92 per cent deep sensibility impairment particularly vibration and joint sense. Reports show that in general this follows shortly after or may be coincident with the paresthesia. This is what would be expected in the comparison with the majority of pathological findings reported.

Incoordination of movement, ataxic gait, etc., are the logical sequelae in the ataxic or tabetic group of the preliminary muscle joint sense disturbance, and it was of interest in some cases to follow the progress of neurological changes in the history and then in a few individuals to observe these features. Interesting yes, but disappointing and discouraging in the more advanced group to see the step by step increase and be powerless to stop it. Girdle pains belong more in this type, they may be not only body girdle pains but involving extremities as well—the feeling of a constricting band makes one think of this situation.

Reflex disturbances occur early as objective signs. They may vary with the type and extent of involvement. Where only the posterior columns are involved they depend much as in tabes on the presence of irritation with increased or destruction with decreased posterior columnar activity.

If there is any extensive lateral column involvement, spastic type with increased reflexes is found. Cases have been seen in our series that run the whole course of progressive neurological changes. It is my purpose to report one such case in which the primary emphasis will be laid upon the central nervous system though all factors must be considered.

(No. 2563.) This case is of interest because it represents one with neurologic findings fifteen to eighteen years before blood changes were noted. The patient, a woman now 53 years of age, came under the observation of Dr. F. P. Norbury in 1903 with a complaint of constant subjective feeling of cold in the legs and feet, and of the feeling that a draft was blowing on her even when in bed covered with blankets and surrounded by hot irons. Though she was of a neurotic temperament and more or less of a complainer, the definiteness and constancy of the paresthesia without any of the hysterical type of anesthesia led to the diagnosis of an early spinal cord sclerosis and the anemia type was then

considered. She was under observation over a period of several years, then was lost sight of until the fall of 1920. A chronic gastro-intestinal history of some years' duration and more recent acute neurologic story was elicited at that time, together with a confirmation of the more or less constant paresthesia existing since 1903. So far as known, no complete blood examination had been made until 1920, though she had been told by various physicians that she had anemia. At that time the blood picture showed a hemoglobin of 50 per cent, a red count of 1,700,000, and white count of 3,400, megaloblasts to the extent of 15 to every hundred white cells were found in the stained smear. The neurological findings were absent, abdominal reflexes, knee jerk and ankle jerk; inco-ordination, diminished muscle joint sense, hypoaesthesia to pain, marked ataxia. Mental confusion was the most noticeable psychic sign. After about three weeks' observation she returned home. The red blood cells had responded only slightly, the count the day before discharge being 2,200,000 per cmm. Symptomatically there was some neurological improvement. Objectively the signs were the same. She was again under observation for a month in January, 1921. At this time the hemoglobin was 80 per cent and the red count 3,600,000. The central nervous system changes had, however, come on apace. She was practically helpless as regards locomotion; sphincteric trouble had commenced; girdle pains and paresthesia were intense. There was almost complete loss of muscle joint sense; ataxia was complete even in bed, though the legs and arms were spastic and showed increased reflex biceps, triceps and ankle jerks, but knee jerks were still absent. Babinski, Oppenheim and Gordon signs were elicited. There was marked muscular weakness of the lower extremities. Cranial nerve involvement had appeared as there was motor difficulty in deglutition and speech. Mentally, confusion, memory defect and emotional instability were noted. The blood picture remained at about the same level during this period; the sensory changes were appreciably relieved, and the sphincteric control was partially restored. She passed out of sight, though has been heard of since then. This case is cited as a demonstration of early neurologic signs and of the increase in central nervous system involvement with hematological improvement.

Present day laboratory methods give us some additional modes of attack which are of decided value in studying cases that present signs of either blood or neurological changes that would give more definite suggestion as to whether we are dealing with a pre-pernicious anemia state. The work of Robertson and Rous, Minot, Emerson and others has shown the value of the study of the immature or reticulated red blood cells as an index of bone marrow activity. Minot him-

self lays considerable stress on the diminution of blood platelets as being of significance in connection with other findings. From the hemolytic standpoint the test of Wilber and Addis and the work of Hansmann and Howard on bile pigments in the urine and feces in increased amount are extremely useful procedures. These coupled with the usual careful blood examinations. Study of kidney function, gastric secretion, and spinal fluid tests are to be thought of especially in the early cases where the element of diagnosis comes up.

They are useful too in checking from the laboratory standpoint the progress that is being made. However, when the condition is at all advanced, even with treatment, it is more frequent than rare to see an improved blood picture but increased signs of central nervous system destruction. This again shows us that treating the anemia, important as that may be, is but caring for a part of the whole picture. Unfortunately, there is very little treatment for the neurological findings that is of value at this stage when nerve tissue destruction is well under way. Hence the importance of recognizing that cases with certain subjective and objective neurological findings may present or develop later the characteristic blood changes. Whatever we do to bring about relief must be done early in the stage of irritation. To carry out treatment really early means early diagnosis, and in conclusion we wish to emphasize the value of recognition and interpretation of the neurological findings in making the diagnosis of primary or pernicious anemia.

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The Norbury Sanatorium.

DISCUSSION

(Abstract)

DR. L. C. TAYLOR, Springfield: One of the most valuable points in Dr. Norbury's paper is that you may have symptoms of the central nervous system

which are misleading unless you go over the patient thoroughly and make an examination of the blood. He would also make an examination of the stomach contents, for very few of these cases ever get away from a chylagastica. There is nearly always absence of hydrochloric acid in the stomach contents.

Three cases in his practice come under the scope of this paper; one near here—a zone in which pernicious anemia is more frequently recognized than in many other districts.

The first case was that of a policeman of this city, but in that case the cord symptoms did not develop until after the blood changes were prominent. He was called to see another patient with marked symptoms of cord lesions early in the case. An eminent neurologist had diagnosed the case as "hysteria," but examination of the blood showed the picture of pernicious anemia.

A second case in the same family was a sister of this woman, who came complaining of numbness in the lower extremities from the knees down. Blood examination showed pernicious anemia.

Another case, whose father had died of pernicious anemia, was seen a few months ago in consultation. While he suspected a primary anemia as the cause of the trouble because of the symptoms presented, the patient had read the history in the newspapers of locomotor ataxia and on account of the numbness in the lower extremities thought he was developing something of that kind. We examined the blood and found all the typical indications of pernicious anemia.

He wished to compliment Dr. Norbury on emphasizing the fact that in cases of primary anemia we may have the cord and nervous systems present before the blood symptoms appear. In those cases the condition of the stomach, the digestive tract, the bile pigment and more or less frequent examination of the blood should be made, on account of the fact that in some cases of pernicious anemia the marked symptoms disappear for several years. The longest period of remission, in the Year Book revised by Dr. Billings, is given as twenty years, but the patient died of pernicious anemia. This emphasizes that the blood, the stomach and intestinal contents should be examined carefully and frequently.

DR. H. N. MOYER, Chicago: It occasionally happens that evident organic involvement of the spinal cord will raise a suspicion of pernicious anemia, and this before any definite blood changes are noted. Some years ago in the office of Dr. Kreider he saw a man who had queer symptoms referable to his right hand. He said that it felt strange and that the hand seemed clumsy. The possibility of a pernicious anemia suggested making a careful examination of his blood. Nothing was found. A year later Dr. Kreider wrote that the diagnosis of pernicious anemia was outspoken.

A valuable symptom which is frequently over-

looked is the condition of the tongue. The mucous membrane is smooth, red and glistening. The papillae of the tongue are distinctly atrophied and by passing the finger over its dorsum it feels smooth. Sometimes this symptom is noted before the blood symptoms are at all pronounced.

DR. RICHARD G. HERNDON, Springfield: There are several factors in these cases which indicate that the same poison which produces the anemia at the same time produces rather widespread changes in other organs. The changes in the spinal cord frequently precede and are often much more marked than the blood changes, as Dr. Norbury pointed out. There are fatty changes in the heart, liver and kidneys that cannot be explained by the anemia alone, and the general symptoms as breathlessness and general weakness, do not always vary directly with the changes in the blood. It seems more probable that these changes are all manifestations of the same unknown poison. Patients with high-grade pernicious anemia often feel and look remarkably well, and like many cases of diabetes and hypertension do not come under observation because they are well developed and full blown. But they do show early symptoms and any patient having any of the symptoms Dr. Norbury has described should have a careful blood examination, because pernicious anemia is one of the few diseases in which part of the actually diseased tissue is available for direct examination. We are very fortunate in having our attention called to these early changes, for so many of them present nothing but the nervous symptoms that unless we are thinking of pernicious anemia show no changes in the nervous changes will be missed.

DR. JULIUS GRINKER, Chicago: Dr. Norbury did well to call our attention to the fact that nervous symptoms are often found in pernicious anemia and are often clinically the forerunners of the disease, at least so far as known, because when the blood is examined in those cases that show marked spinal cord symptoms it will nearly always be found that the characteristic blood changes of pernicious anemia have existed for some time. Many cases of pernicious anemia show no changes in the nervous system. In my service at the Cook County Hospital repeatedly we often expected to find spinal cord symptoms—and though the blood was typical of pernicious anemia, there were no nervous symptoms. However, if a neurological examination discloses the symptoms of postero-lateral cord disease, it will be found that the pernicious anemia is thoroughly established and should have been discovered by blood examination earlier in the course of the disease. It is quite correct, as Dr. Norbury states, that these nervous symptoms are found in a large number of cases of pernicious anemia and are occasionally the means of discovering its existence.

My experience coincides with that of Dr. Norbury, that although we may see almost complete recovery in the blood picture, the spinal cord symp-

toms never change. Many cases improve under arsenic, but the subacute cord changes have remained indefinitely and eventually cause the patient's death.

One point worthy of emphasis is that you may have the same set of spinal cord changes, the posterolateral degeneration—the changes incident to pernicious anemia—in cases other than pernicious anemia. They may be found with secondary forms of anemia, in cachexia, and in many other forms of ill health. Several years ago it was my privilege to report twenty-one cases of subacute combined cord degeneration in which spinal cord changes appeared without pernicious anemia being present. The entire series I reported then was published in the *Journal A. M. A.*, some with post-mortem findings, and there were only three well-marked cases of primary pernicious anemia among them.

We must therefore bear in mind that when confronted with the symptoms that Dr. Norbury has pointed out, we must think very strongly of pernicious anemia, but must not be disappointed if we find a secondary anemia or cachexia from other disease. Combined cord degeneration has been recognized as a syndrome by itself, the cause of which is unknown, but it is probably due to a toxic condition capable of inducing pernicious anemia and combined degeneration of the cord, either singly or combined.

DR. JAMES C. GILL, Chicago, wondered if we are justified in calling the spinal cord symptoms in pernicious anemia characteristic? As Dr. Grinker has just said, we find the same changes in other disorders, such as multiple sclerosis, spastic paraplegia and combined sclerosis conditions that sometimes follow toxemia from focal infections or infectious diseases such as diphtheria, typhoid, etc. Post-mortem examination has shown changes such as those described by Dr. Norbury, and I feel we are not justified in calling it pernicious anemia.

We see cases showing the blood and spinal cord changes of pernicious anemia clear up entirely after finding a source of infection and getting rid of that. He recalled one such case where the patient was confined to bed, being unable to help himself due to the pronounced spinal cord changes and a blood picture characteristic of the pernicious type of anemia. The patient had badly infected teeth and tonsils which were taken care of. This was followed by a gradual improvement in the symptoms. At the present time, this man is attending to his business and seems perfectly well, though he still retains some evidence of spinal cord involvement, as shown by some spasticity in the lower extremities, due to some permanent change in the lateral tract of the cord. The blood is perfectly normal. He wondered if we can see these cases early enough either showing a picture of the blood changes and characteristic of pernicious anemia or the spinal cord changes such as described, and search diligently enough for the source of tox-

emia, if many of these cases would not be permanently cured. The trouble is we do not see these cases until permanent changes have occurred in the spinal cord or in the blood producing organs and then we cannot expect much improvement.

DR. GARM NORBURY, Jacksonville (closing): I have very little to say, except to thank the doctors for bringing up the different points. As Dr. Gill said, if we can find these patients early they will get better. What I have to offer was to show the neurological findings, if present early in connection with the pernicious anemia, may be of value in handling these cases. When the degenerative changes have come, then we are dealing with central nervous system changes from which recovery does not occur.

PATERNALISM DESTROYS SELF RELIANCE. STATE MEDICINE A MENACE TO THE PEOPLE.

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There is a group of bills prominent before state legislatures and the federal congress since 1917 which, if enacted and retained among our laws, would immediately destroy the medical profession of the United States and would undermine and ultimately destroy our republic. I refer to the group of bills which propose or pave the way for what has been called "state medicine."

Germany, with a paternal government, has state medicine, instituted in 1883 after Bismarck had announced that he would use compulsory health insurance to "bind the working classes to the state." It has bound them in a fashion that would be unbearable to the working citizens of a republic, and it has so herded the people who work that in 1916, when Germany grandiloquently prepared peace terms for the supposedly defeated allies, she generously allowed time for adoption by the presumably beaten countries on every count but one. One requirement in her terms was intended to protect the autocracy against revolt or insubordination. That one requirement was that each of the allies adopt a system of state medicine without delay.

Its power has been proved and it is not a power for good. The effect has been to standardize people into herds and classes, which was foreign to the minds of the founders of our nation. It may be true that during recent years centralization and bureaucratic control have caused our

government to function as an autocracy. If so, it was an accident which should be carefully guarded against in the future. Autocracy is foreign to the form of government on which we pride ourselves.

Government may be patriarchal or fraternal. Under the first form a recognized head transacts the group business and rules its subjects as a parent rules his children. The subjects, being without voice in the family councils, obey orders and are relieved of all responsibility. Under the other group business is transacted by popular suffrage after an agreement on certain rights and responsibilities. One responsibility accepted by each citizen is that he produce an economic share commensurate with his needs, to the end that he be not a burden on his neighbors.

Sound political economy recognizes as paupers only those physically or mentally or morally disabled, and the burden of their care is borne by society, each active member of the group contributing a share. This individual responsibility obtains in a republic or a democracy. When it does not, then the purpose of the fraternal agreement is thwarted and responsibility is no longer equal and the government cannot continue; it must revert to the patriarchal, and all citizens endure taxation without suffrage or it must fall to the communistic, and its citizens endure confiscation wherever the confiscating is good.

Each bill of this group hides its wolf fangs under the fleece of the sheep. They all appear in the guise of altruism, and they make their appeal through a play upon hope—indefinite hope of things not stated. Altruism is appealing; hope is popular; the combination is strong. They appeal to the emotions by proposing in an indefinite way to accomplish some unspecified good. The maternity bills are, possibly, the most appealing of the group. Maternity touches us all.

The maternity bill presented to the present congress proposes by title to help states to help women by prenatal and postnatal care, regardless of financial standing or economic ability. By line the bill proposes that the federal government give money from its treasury to any state which accepts its provisions and allots a like sum of money for its purposes; the money to be spent

by the state boards (to be created) under the direction of the federal board (created by the bill), the money spent being prescribed to promote the care of and provide instruction for women in maternity. The bills presented to the Illinois legislature at its last session will serve as samples of the team bills of the states. These bills widen the scope to include the care of babies under one year and they specify the employment of doctors, nurses and instructors by the state.

Analysis reveals that the presumptive basis for the proposal is that women need better maternity care than they have received in the past, that money can buy it and that tax money from the public fund properly can be used for the purpose, and that state care can be more efficient than private, competitive care.

Considering this presumption, I cite that the highest possible degree of care is limited. It must stop with the reaching of the highest possible human efficiency. No person who ever watched a woman in labor will have the temerity to expect a time when one hundred per cent of all women may labor through without some fatal accident or incident. There are women in the country who avail themselves of the best maternity supervision, nursing and education in the world, renting an education early in the course of a pregnancy and keeping it on duty twenty-four hours a day throughout the period, to supervise their every action. These women do not show better mortality or morbidity figures than do their sisters of less money and healthier habits. Their education teaches them that important things antedate the beginning of pregnancy.

There is no woman in the continental United States today who cannot obtain prenatal and postnatal care if she wills. There is no government short of autocracy which can give it to her if she will not. Ancient Sparta did that and raised a race of men that is a wonder of the ages; forgetting, in her enthusiasm, that the home was the unit and inviolate. Then Sparta fell and on that point killed by government. Neither private money nor state money can compensate for private neglect to use care which is now in reach. Neither can money repair the damage of bad hygiene in matters of dress and amusement indulged by our nation's girls during their formative years.

In a republic the use of money from a public fund must presuppose a public benefit. Treasuries, national and state, are fed by tax money. Tax money, whether it be direct or indirect, is the contribution of the individual as his share of the group expenses. Group expense in the beginning was construed to mean the necessary transaction of the public business. This construction has held until the present time with but one notable exception. In the beginning the private matter of schooling children was voted a matter of public welfare, because no agency existed which could supply instructors separately, or house the number involved. In that instance it was thought wise to keep the money account separate from governmental expenses proper. That condition still exists. In the present instance private agencies do exist and stand ready to keep pace with all demands. No similarity of need exists.

With this in view, no reason can be cited why a charwoman in Connecticut should send money through the medium of the treasury to an oil magnate in Texas, to pay the doctor's bill of his wife. If a man or a group proposed to hire a nurse for my wife or child, I should resent it. And I know from an intimate acquaintance with American family life that craftsmen, farmers, merchants and laborers share that feeling. We have prided ourselves on our independent ability to keep out of the poorhouse and off charity lists. The huge proportions of these recent socialistic proposals and the noises of altruism made by paid lobbyists and campaigners have concealed the details of operation and have blurred the vision of many citizens who would otherwise have been quicker to resent an attempt to undermine their independence.

In various parts of Europe it has been predicted that a republic cannot succeed and continue. Switzerland, they have claimed to be too small to serve as a test; they have said that the plan may serve for a small group but not for a large group. They may be right, but at least, we have a nice Republic, entailed from our free-thinking fathers who left the pauperizing influences of Europe to give it a trial, and loyalty leaves us no choice but to make it work. If we are to fail before the poison-thought of the pauper reared thousands who come to us from countries whose governments act in parental

capacity, then we must fight and smile while we fail, that our fathers may not turn their faces to the walls of their graves.

We have never lacked men willing to fight for our country, but fighting has been held to be a passionate and glamorous business. Just now we need men and women willing to think for our country, and thinking is cold and dispassionate. Also public thinking is expensive for the private purse.

We who were raised with a horror of the poorhouse, which was then the popular word for "state care," have one duty which cannot safely be left to our hired help. It is that we instill in our children an intense fear of state care, however disguised, and teach them to believe that the state care of their day is synonymous with the poorhouse of their parents and the paternal government of their children. A paternal government is not a republic. Attending to that duty, we have one consolation, and it is the thought that we may not fail. The prophets of Europe may be wrong.

That state care is more efficient than private competitive care I deny. In competition lies keenness. In its absence are standardization, ruts of routine, loss of the personal relation and lethargy. The education mentioned in the maternity bills is most desirable, but it also is already available. All of the so-called non-technical instruction in these matters can be printed in a very small pamphlet, such as has been for years distributed with gratifying results by the health departments of Illinois and other states. All of the rest of it is the practice of medicine; when symptoms arise the case has become one in which the physician observes, correlates, interprets and treats. It has become a very individual and a very private matter, and one whose ends are best attained by the keenest of competition. In all state service competition is out and individualism is frowned upon, seniority rules and workers are prone to become lethargic. In state service it is a classic that good men outgrow their jobs and quit, while poor or indifferent men never resign and seldom die. A new law cannot change those things.

There are phases of care in which state service, even though handicapped by these things, functions better than private care could possibly do. The care of the insane is a case in point. Mem-

bers of a private family cannot care for another member who is violently insane, without great menace to themselves and to their neighbors. It is properly the duty of a state to protect neighbors from each other. The state has fulfilled that duty by providing houses and guarding and, incidentally, care for those who would otherwise constitute a public menace. In addition, these patients are legitimate paupers through disability, and their care is properly a burden for society. On the other hand, the rearing of children can never be other than a private, family matter. It carries no menace and so is not a matter for the police.

These bills when enacted, would provide state care for your child and my child for a stated period of one year. If my child is entitled to that care for twelve months then I claim the same care for thirteen months, for it would be a picayunish government which would coldly leave the helpless baby without care because the calendar expired. A child needing care yesterday must need care tomorrow; he still is helpless. And so through childhood to maturity—the time always arbitrary—and the state will have produced a pauper-nurtured son, untrained in business of self endeavor, willing to continue a pauper in the only way which he has known. Of such a beginning is paternalism.

A discussion of the political patronage and the fence-building funds carried by the maternity bills and the others of the group, I leave alone. I have no primary quarrel with this line of political endeavor which is a thing that becomes necessary when a democracy promotes itself to be a republic. I do wish, however, that they be kept within reason and bear a due proportion with the limitations of feasible taxation. Taxation does have a limit. That, however, is a matter for mistakes and experience and bears no lethal menace to our country.

State medicine killed the medical profession in Germany. There was a time when the physicians of the world went to Berlin for the best advanced thought. Since German doctors empanelled in the service of the government under the workings of the Compulsory Insurance Act, nothing new has come from Germany except two laboratory results, one of which was the work of a chemist who had not studied medicine. Today the United States is the world center of

medical education. The keen urge of competition is the lifeblood of progress.

Compulsory health insurance was the first of the group to appear in this country. It came to us as German propaganda before we entered the war and was not recognized as such until given light of subsequent developments. Synchronously with the proposals that it be adopted by the allies this measure was offered to us and in 1917 it appeared, almost without warning, in twenty-two state legislatures. It was sponsored by the American Association for Labor Legislation, an organization whose membership lists showed only the thinnest sprinkling of employers of labor or employees or doctors, the three groups immediately affected. None of these groups had recognized such a need for this country. The proposal made much headway before any were equipped to combat it, for it was pushed by efficient full time workers and by lobbyists who were spellbinders. Money for its pushing seemed at that time and seems now plentifully easy.

Health centers and state clinics where people who are not paupers may receive free treatment, are obnoxious to the American citizen who wishes to pay his own way but are hailed with acclaim by immigrants who have been taught to regard a government as a father. These things, together with the various other agencies practicing medicine, have made inroads on the income of the medical profession. If it continues, there will come a time when service will suffer and when good men will desert the profession. Some doctors would be happier cleaning fish than working under a state panel on salary. In Germany panel doctors have recently been making professional calls at eight cents per visit, and crowding in enough visits each day to continue to live. I cite with confidence that such a visit is not worth eight cents to the patient. And so it has been said that in the last decade before the war, the German people received the poorest medical attention known in any civilized country.

In matters of state medicine let us see clearly which are state matters and which are private. Preventive medicine is a state matter, inasmuch as it protects one man from his neighbor's contagion. It properly carries police power, to the end that one man may not endanger his community. Curative medicine carries no menace to the public and it must remain a private burden

for each family in a republic. If there are reasons why the state should buy medicines and purchaseable services for its citizens, then there are the same reasons why the state should buy groceries and do plumbing for its citizens. The line between the preventive and the curative is distinct and will not lead us astray.

Each citizen may carry voluntary insurance in existing companies, against the expense of illness, if he wills. That is prideful, American and right.

Political economy has been a neglected study among us. Our college instructors of the subject have depended too largely upon European textbooks and training for their teaching information, with the result that business men and legislators have had much to unlearn or to reconstruct after leaving college. Now we carry the added burden of a vast influx of bolshevistic and autocratic thinking and of irresponsible uplift endeavor, to a point where it behooves us to consult a compass.

A young man who plans to invest six years' time in the study of medicine is entitled to know that powerful agencies have already pledged wedges which would deprive him of the fruits of his labor. If these agencies fail in their effort it will be because of a national clearness of vision which has as yet shown but partially in meeting this propaganda. The proposals come back with each new legislature. The principal fights have been on the compulsory health insurance proposal and have been staged in New York, Massachusetts and California. In California it was defeated only after a referendum to the people of the state. The issue is one of Americanism and not politics. If it wins, the doctor goes out first and at once and we will no longer have the family physician and the specialist of the past. The relation between state clinician and patient will not be the same. Then, when the republic has reverted to the patriarchal our children may console each other with the thought that our failure was not the first. This republic, however, can stand if only its successive generations can avoid the mistake of thinking that the founders were old fogies.

Nothing fundamental has changed since the constitution was written. Nothing fundamental will change.

DIFFICULT CASES IN BRONCHOSCOPY
AND ESOPHAGOSCOPY*

EDWIN MCGINNIS, M. D.

CHICAGO

Case 1. Baby Roscoe C. Giles, aged 20 months, son of Dr. Roscoe C. Giles, Chicago.

Family history negative.

Patient's history negative. Normal delivery, no instrumentation; breast fed seven months, then on usual infant diet.

None of the diseases of childhood.

Present History: January 3rd, 1921 at about 10 o'clock a. m., the baby climbed up on a chair and obtained a handful of salted peanuts from the buffet. While in the act of chewing them his mother scolded him and he began to cry before his mouth was completely emptied. A violent coughing spell lasting about twenty minutes ensued after which he was apparently well. At 10 p. m. the coughing attacks were renewed and increasing dyspnea developed; respirations averaged about 60, pulse 120, temperature not taken at that time. The next day he was up and around the house with occasional coughing spells lasting from 10 to 15 minutes. At about 9 p. m. temperature was taken, and found to be 104°, respiration 68, pulse 120. Physical examination showed an absence of breath sounds over the right lung. Dr. Mark Jampolis examined the baby and made the diagnosis of an obstruction of the right bronchus possibly due to a foreign body.

I saw the baby at 4 p. m. January 5, 1921, at the Presbyterian Hospital. X-ray pictures showed only increased density of the right side. (Fig. 1.)

Operation: Upper bronchoscopy without anesthetic revealed foreign body in right main bronchus. On removal proved to be one-half of peanut kernel. Time 2 minutes.

Post-Operative History: Baby developed a croup lasting about three days, which yielded readily to inhalations with a croup kettle, and has since been in excellent health.

Difficulties in this case were due to the character of the foreign body and age of patient. Diagnosis had to be made on the history and physical findings. X-ray of no help in diagnosis

or operation. Removal difficult because of small size of tube used, and peanut about same color as bronchial mucosa.

Case 2. H. E. L., aged 14 months. Referred by the late Alfred H. Fowler, Morgan Park.

History: March 21, 1915, inhaled some pieces of peanut. Child coughed occasionally when awake, and wheezing present.

Temperature 98.6°. Respiratory sounds apparently somewhat diminished on left side.

Operation: Upper bronchoscopy, without anesthetic, thorough search of right and left bronchial tract failed to reveal foreign body. About one hour later the patient coughed up a very



Fig. 1. Case 1. One-half peanut in right main bronchus.

small piece of peanut. Lung findings negative two days afterward.

Recovery uneventful.

Difficulties: Small size of patient made it necessary to use a tube of small diameter.

Character and size of foreign body. X-ray did not show body.

I was uncertain in this case and had the late Stanton A. Friedberg examine this patient. He was unable to locate peanut.

Case 3. S. C., aged 3 years. Referred by Dr. Anderson, De Kalb, Ill., and Dr. Frank Novak, Chicago.

*Read in Eye, Ear, Nose and Throat Section, Illinois State Medical Society, at Springfield, May 18, 1921.

About the middle of February, 1921, child was playing with an ear of field corn, and was thought to have drawn a grain into his trachea. Following this he had an acute attack characterized by cough, shortness of breath and cyanosis. These symptoms gradually subsided. X-rays were taken and considered negative. Repeated examinations failed to localize any definite condition, but the continued cough and occasional attacks of dyspnea continued.

March 18, 1921, severe coughing, respirations difficult, and extreme cyanosis. Unable to take nourishment. Temperature range, 100° to 103°. Temperature on admission to hospital 104.8°.

Examination of chest—diffuse coarse rales over both sides front and back.

White cell count 21,000.

Diagnosis: Broncho-pneumonia complication foreign body.

Operation: March 19, 1921. No anesthetic. Direct laryngeal examination revealed foreign body in trachea. This was removed; proved to be a swollen kernel of white dent corn. Time 4 minutes.

Patient made an uneventful recovery.

Difficulties in this case:

1. Diagnosis—should have been made on history and physical findings. Too much stress on X-ray pictures—corn does not show.
2. Broncho-pneumonia makes a bad complication.
3. Delay in operative interference.

Case 4. Baby W. A., aged 3 months. Referred by Dr. Oliver, Chicago.

April 20, 1921. Mother had pinned baby's gloves to coat with safety pins, clasp of one of them broken and became loosened and he removed it with his lips and evidently swallowed it. Mother missed pin, baby vomited blood stained mucus, so she thought to help passage of pin with castor oil.

April 21, 1921. Dr. Oliver had x-ray taken which revealed pin in esophagus.

Saturday, April 23d, 1921, x-ray revealed pin, open in esophagus, points up, sharp end buried in the esophageal wall. (Fig. 2.)

Operation: With fluoroscopic aid gently pushed pin into the stomach, by freeing sharp end, and grasping it with forceps and drawing

it into the lower end of tube so as to prevent cutting mucosa. I then passed esophagoscope into the stomach, and with forcep was able to turn pin, and grasp ring end. By traction pin came into the lower end of the tube, and was extracted. Time 15 minutes.

Patient seemed in good condition.

Difficulties:

1. Patient was a very small delicate child.
2. Character: Safety pin far down in the esophagus, points up.
3. Removal difficult.

About 9 P. M. same evening, child was a little fussy and parents give it some paregoric; after this he became quiet, and at 10 P. M. he passed away. No postmortem, so I can only guess as to



Fig. 2. Case 4. Open safety pin in esophagus.

cause of death, which was probably due to hemorrhage from esophageal wound.

In conclusion, bronchoscopy has been described as a specialty with a specialty. All foreign body cases are difficult as each presents special problems. Smooth bodies such as coins are easier to extract, while irregular sharp ones are much more difficult and more liable to damage the parts.

Finally, I wish to make a plea for early diagnosis, and early operative interference, because patient stands a much better chance if removal is accomplished early.

104 S. Michigan Avenue.

FOOT PROBLEMS*

ELIZABETH B. BALL, M. D.

QUINCY, ILLINOIS

My object in bringing this matter before you is two fold: 1. To call your attention to the enormous number of abnormal feet in both children and adults. 2. To get you to realize how much can be done for these same feet, by the wearing of properly fitted shoes.

You are undoubtedly aware that a great number of young men—volunteers and drafted—were rejected on account of abnormalities in their feet.

The percentage of weak feet in women is also very high, much higher than in men, we are told. The principal cause for the increasingly large number of both weak and painful feet is not difficult to find, not even for the most casual observer, providing he or she is willing to admit it.

A short time ago, a young woman whose position makes it necessary for her to come in contact with numbers of women every day, remarked to me: "Doctor, I've found out why so many of these women almost snap my head off when I try to interest them in some proposition or other—their feet hurt. Their shoes pinch and of course they are cross, how can they help it?"

The improper shoeing of the feet must be held responsible for the production of a majority of flat feet, Morton's disease, depressed anterior arch and hallux valgus.

Before proceeding further, it may be well to consider the structure of the foot.

The construction of the foot is similar to the hand; but it is stronger, the parts less movable, and formed so as to be able to sustain the weight of the body when in an upright position. The big toe, for instance, is more solid than the thumb, as it must assist in supporting the body, its metatarsal bone directed away from the others.

The foot is placed at right angles to the leg. In order that it may maintain the greatest weight in this position, it is formed in the shape of an arch—the tarsal bones representing, roughly, the stones in an arched stone bridge; the summit of the arch formed by the superior articular surface

of astragalus (this being the keystone), and the two end points on which the arch rests are under the surface of os calcis posteriorly and the heads of the metatarsal bones anteriorly.

The weakest point in this arch is in the joint of astragalus and scaphoid. It is more liable to yield at this point, especially when the weight is increased or the ligaments for some reason or another become relaxed. The short, strong, calcaneo-scaphoid ligaments, reinforced by the tendon and insertion of tibialis posticus, protects this joint and the integrity of the arch, preventing sagging of the inner border of the foot and the downward course of the head of astragalus. This ligament, however (according to Grey), is more elastic than most other ligaments, and allows the arch to yield.

The long and short plantar ligaments and the plantar fascia more or less bridge over the arch and help to maintain both ends of the arch in proper relation to each other. In addition to this longitudinal arch there is the anterior, or transverse arch, formed by the anterior part of the tarsus and the posterior part of the metatarsus—though in reality there is but the one arch—the structure of the foot being dome-shaped, doubly concave on its plantar aspect.

The muscles are the most important factors in maintaining the foot in proper balance for weight-bearing. These are the adductors, abductors, and the intrinsic short muscles of the foot, the latter acting much as a bowstring in supporting and preserving the integrity of the arch. If the strength of these muscle groups remains in proper relation, the foot retains its proper balance. If the abductors (the perineals), which by their contraction tend to turn the foot outwards and depress the longitudinal arch, are the stronger and overbalance the adductors, we have as one authority remarks, "the potential of foot strain." In that case the weight of the body, in its transmission through the tibia to the astragalus, is shifted, and does not fall on the center of the astragalus (the keystone) as it should, but to the inner side of the foot, thus tending to relax the ligaments and joints. The bones cannot resist the downward thrust; and with the ligaments relaxed, the astragalus dips over inwards, forwards, and downwards, and the os calcis rolls

*Read at the 71st annual meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

over to the side, and the whole position becomes one of instability, which walking still further increases. As the plantar structures weaken, the dome of the foot is lowered, the foot is broadened and elongated. If this position of the feet in standing and walking is continued, permanent changes in the bones take place, the ligaments are weakened beyond their normal elasticity, the muscles lose their strength, and the arch becomes more and more lowered until the bones rest on the ground and the feet become fixed and spastic. (The spastic condition can begin much earlier.) The function of the foot to act normally as a shock absorber is, of course, lost in all these abnormal positions of the feet.

The foot is strongest and the longitudinal arch is raised when the foot is adducted and inverted, and the arch is depressed and lowered when the foot is abducted and everted. The treatment of pronated, weakened feet with lowered arches is rendered very simple and rational if these facts are borne in mind.

As to causes of weak feet, we will first consider the predisposing of those that tend to favor the abduction, pronation, and weakness.

1. The foremost cause of majority of all foot troubles is the shoes, or the use of improper shoes. How have we come to be so irrational as to consider the modern boot a suitable covering for our feet? Why do we proceed, limping along through life, literally handicapped at every step, deluding ourselves that a distorted and maltreated foot is pretty because it is crowded into a small pointed shoe. It must be admitted that some do not know better.

We know that the points of support of the foot are the heel and the heads of the first and fifth metatarsal bones; that the width of the foot increases and the arch descends as the foot is placed on the ground; that in walking the great toe should have free action. With the common faults of the shoe—too narrow, too pointed, heels too high, not long enough, insufficient support in the shank—free motion of the feet in walking is impossible. When the foot is adducted the great toe is also flexed; and plain common sense will tell us that neither is possible in narrow pointed shoes, and we will find that the great toe is almost always abducted in the civilized adult.

The proper balance of the foot is lost in improper shoes. (Notice people walking on the street—how the foot is moved as a whole with no motion even in the ankle.)

2. Walking with toes turned out, and

3. Standing with the toes turned out are two additional predisposing causes.

In walking, the feet should be nearly parallel—straight foot. Standing produces greater strain on the structures of the foot than walking; hence it is of still greater importance that the foot should not be placed in a position of abduction. All bad postures are predisposing causes.

In addition to the cause mentioned there are:

1. Acute illnesses, and operative cases, in which the weight-bearing is suddenly stopped and again suddenly begun while the structures of the foot are relaxed.

2. Congenital weakness of the structures.

3. Chronic illness.

4. Overtire.

5. Short tendo-achillis or contracted, shortened calf muscles.

6. Increased body weight.

This last condition, accompanied by impaired circulation of the limbs and the wearing of improper shoes, are the chief causes of foot strain in most adult women. Certain changes are liable to take place in middle life with increase in body weight and age. Both men and women are less liable to take the proper amount of exercise; there is not the same resilience in the foot, nor, for that matter, of the whole body, and the muscles and ligamentous structure is apt to suffer.

Lax ligaments and muscles favoring abnormal positions of the feet may be found where there are actually diseased conditions of the foot or as results from those conditions—such as rickets, sprains, traumatism, paralysis, etc.; but we have not time to deal with those causes in this paper.

When we turn to the symptoms generally complained of in weak feet they are: 1, pain; 2, tenderness; 3, swelling; 4, disability; 5, deformity.

The pain is variable—it may amount to a feeling of fatigue, while at other times it may be severe enough to cause actual disability; and again, it may be a constant or an intermittent ache, often extending up the leg. The location of the pain is also variable, nor does the pain

necessarily bear a definite relation to the deformity.

Tenderness, when present, is found in the heel, over the astragalo-scapoid joint, or the sole of the foot.

There is generally some swelling of the foot or leg due, undoubtedly, to impaired circulation. The foot is moist and flabby to the touch.

The disability expresses itself in awkwardness of gait, difficulty in locomotion, in lameness (due to pain and tenderness), lack of elasticity in gait and movement of the foot (no spring) turning out of the feet, accompanied with restriction in adduction or inversion of the foot, and spasm.

In considering the deformity it is well to bear in mind that all painful feet are not flat feet, and many flat feet are not to be classed among the painful feet, to use Dr. Ridlon's expression: "There are flat feet and flat feet. There are feet that God made flat and feet that have been made flat by man." And he further says, that he cures more patients who come with ready-made diagnosis of flat feet by giving Senna tea than by putting arch supports under their feet. As a matter of fact, the high arched foot is often the weaker foot. All abducted feet are not flat feet, but all flat feet and all weak feet are abducted.

During the past three years it has been my privilege to examine little girls, young women, and older women for gymnasium classes, and the number having some form of foot trouble or other is appalling. Further, let me say, many of the conditions have been corrected by the wearing of properly fitting shoes.

In examining the feet we take the following tion of the individual is ascertained; 2, the shoes points into consideration: 1, the general condition (their shape, how they are worn, etc.); 3, the position of the feet in standing and walking, both with shoes on and off; 4, the position of the foot when at rest; 5, the range of motion, whether limited or not; 6, the strength of muscles tested; whether the foot is flabby or rigid; whether there is tenderness or not anywhere; whether there are callous spots and their location; whether the internal malleolus is specially prominent; whether there is a rolling of the foot at its inner side; and whether there is shortness of the tendo achillis, and finally an impression of the foot is taken.

In passing let me just mention two or three other conditions of static disturbances of the foot:

Hallux valgus or the "fashion deformity" as one prominent writer terms it.

Depressed anterior arch.

Metatarsalgia, or Morton's disease.

Hallux valgus is perhaps the most painful of all foot affections of the static type, barring anterior metatarsalgia.

Normally we should walk with the big toe slightly adducted, as you see in a child with unspoiled feet. The abduction of the toe is an artificial condition arising from the use of badly shaped shoes. The convex sole of the shoe, particularly on the inner side, makes the shoe pointed, and does not allow any proper room or motion for the big toe, and it is pushed outwards. The high heel makes the foot slide forward, intensifying the dorsi-flexion of the toe and crowds them together.

The condition of depressed or lowered anterior arch is so common, that one authority ventures to assert, that it is found in the majority of women over 40 who have been wearing high-heeled and narrow pointed shoes. What has been said of the faulty shoes applies here.

The treatment of most foot conditions should begin by changing the foot-wear—and in ninety cases out of a hundred that is necessary—giving the patient a shoe that is built on lines conforming to the need of the foot and so as to allow physiological play to the foot in walking.

The essential points of the shoe are that it should be straight on the inner border, have a flat sole, amply wide to support the whole width of the foot, a flexible shank, and if possible a low heel.

Where there is a short tendo achillis and the foot is rigid in an adult, a higher heel should be used or is permissible if the tendon is not to be lengthened. In case of pronation in children the inner side of the shoe is raised or built up by a wedge in varying heights according to the need, and broad shoes with straight inner sides should be insisted upon.

All cases that can be made to do so, should be taught how to walk, avoiding the toeing out, which causes the abduction and pronation of the

foot and no exercise is as satisfactory as correct walking.

Our friend, Dr. East, in attempting to teach patients how to walk to correct certain deformities, says: "Walk, Charley Chaplin way." This never fails to impress the patient.

Various special exercises should be given with the object of strengthening the muscles and thus overcome the defect and deformity. It is the consensus of opinion that exercises are the most effective as to curative value in the treatment of foot strain and foot troubles.

In conclusion let me urge you when making physical examinations of your patients to pay particular attention to the feet, as many obscure feelings of ill-health can be traced to foot conditions.

DISCUSSION

DR. C. W. EAST, Springfield: This paper is interesting to me for its practical worth and also because I consider it an important matter to bring before the public. Such a paper might have been discussed in the Section on Surgery or Orthopedic Surgery with great appropriateness, or in a Section on Preventive Medicine. It is very significant that one paper could belong in so many sections of a state medical society.

I have chosen to discuss the paper from the standpoint of the pediatrician and the standpoint of preventive medicine in pediatrics. You see how all the aspects of the case are dovetailed. They are one organism, really, and cannot be separated.

The nutritional aspect of weak feet is most important. We begin to see the potential weak feet in infancy and the consideration then is that of nutrition. I have heard most of the papers in two or three sections and have heard viewpoints emphasized. I heard a paper this morning emphasizing the value of nutrition from the standpoint of weight, proper weight being an index to the proper nutrition. Later I heard the oration on medicine, which emphasized the fact that the proper development of tissues is all-important. Both things are true, but I like the latter view especially. I heard a farm paper recently, and there I found the stock growers are rather ahead of the human animals. There I found questions and answers as to what cows should eat to produce milk, questions as to breeding animals, as well as a frequent discussion of the pre-natal care of animal mothers, with a view to the health of the offspring, and the infant feeding aspect of farm animal life is not neglected. We must admit that they are far ahead of the medical profession in the practical relation they sustain to their clientele, and we can well reproach ourselves. I agree with Dr. Ball that the muscles are the most important in maintaining the

balance of the feet. Rachitic disease is not the only cause of misplaced bones, however.

DR. GEORGE E. LYON, Decatur: I was much interested in this paper and the subject deserves a much better lantern for exhibiting the pictures and much more attention from the medical profession than it now receives.

I wish to approach the subject from an orthopedic standpoint, from experience in examining over 100,000 feet in the army service.

The first cause for flat feet is malnutritional diseases of early childhood which permit the whole foot to pronate or causes a bending of the tibia; second, injuries to the arches of the feet—the common things which everyone recognizes.

The doctor mentioned short heel tendons. In examining thousands of men, day after day, who did and did not have foot trouble, we arrived at the following conclusions: Of the men whose nutrition was and had been correct there were two causes for flat feet: first, the short heel tendon. We arrive at the conclusion as to the tendon by fully extending the leg and the foot supinated and dorsal flexed. If unable to dorsal flex the foot to a right angle with the shank of the leg you have potential trouble. If you are unable to make it twenty or thirty degrees to the right angle you know that patient will have painful feet and very frequently pronated feet or lost transverse arch.

The other cause is faulty weight line, as shown with the patient standing erect, by dropping a plumb line from the center of the patella. If it falls over the second metatarsal and its prolongation to the second toe, regardless of whether the foot is flat, they can walk all day without trouble, but if the plumb falls outside of the second metatarsal the patient will sooner or later have painful feet. I had a great deal of trouble in relieving the soldiers' painful feet until I found this out. The reason the short heel tendon causes trouble is that it prevents dorsal flexion of the foot at the ankle when the patient walks erect and thus causes the ligaments of the tarsus and metatarsal arch to give way and by doing so causes pain. The doctor says painful feet are largely due to improperly made shoes, and she is right, as we see children of mothers who wore very high heel shoe with short heel tendons, and in the army we found a larger percentage of short heel tendons among the student officers who came largely from the cities than among the men from the rural districts.

Another thing the doctor mentioned but did not emphasize, is that the high heels do not give any support to the ankle and thus permit a constant strain when the patient walks on irregular pavement. Another thing is that the high heels eliminate the normal spring of the arch of the foot and permit the jar of the contact of the heel to be directly transmitted through the bones at every step, and in this way cause patients to be nervous or neurotic from the shock to the spine and brain.

POST-OPERATIVE PULMONARY COMPLICATIONS*

F. A. NORRIS, M. D.
JACKSONVILLE, ILL.

Impressed as I have been, by the disaster of sudden death in patients apparently on the way to recovery, without however offering a constructive solution of the problem, I present the subject to you with the hope that some helpful points may be brought out which will invite discussion.

With the rapid development of surgical technique in recent years, and by pre-operative care and selection of patients for operation, much has been done to prevent post-operative complications. Among these, pulmonary complications stand out most conspicuously and are the most serious, since they appear to be unavoidable and pulmonary embolus may be correctly called the defensible calamity of surgery.

There is a recent survey of over 56,000 cases operated on. Of this number 40,000 are general cases with pneumonia morbidity of 1.1 per cent. and a pneumonia mortality of 0.4 per cent. in the 16,000 abdominal cases we find a pneumonia morbidity of 4 per cent. These figures are striking since they include some of the best clinics of the country.

In the analysis of my own cases I have taken records of 2,080 cases operated on. Of these 1,250 were laparotomies and the remainder general operations. Of the 2,080, thirteen developed pulmonary complications of which seven were pneumonias and six pulmonary emboli. All these followed abdominal operations except one bronchial pneumonia which developed after a thyroidectomy. Five of the pneumonia patients were in the hospital some days previous to operation and were considered good surgical risks; none had pre-operative symptoms in the respiratory tract, except one patient who had a slight coryza. This patient had a clean appendectomy and died on the fourth day from a lobar pneumonia. Four cases were respectively a thyroidectomy, prostatectomy, cholecystotomy and herniotomy. Two pneumonias were operated on a short time after entering the hospital for suppurative appendicitis with diffuse peritonitis;

both had pre-operative pulmonary irritation and one succumbed to bronchial pneumonia. One patient, 76 years old, developed a lobar pneumonia after a cystotomy, under local anesthesia, had been done as a preliminary step to prostatectomy. This patient's age, condition and weakened vitality would account for his complication.

The remaining six cases were pulmonary emboli. This complication seizes its victim without warning and no type of individual is immune or no preventive measures are possible and its mortality rate is very high. It occurs most commonly from the fifth to the twenty-fifth day after the operation, but may occur at an earlier or later period. The six cases I have had the misfortune to have, occurred in good surgical risks without pre-operative pulmonary complications and all proved fatal. Two were operated on the day they entered the hospital, and four were in the hospital some days for diagnostic purposes and other preparations.

Case 1. Male, aged 60. Acute empyema of the gall bladder. Cholecystectomy done without difficulty; patient had previously had drainage of the gall bladder. On the eleventh day had been sitting up for a time and was apparently making an ideal recovery. At 1:30 p. m. was seized with a severe pain in left chest after being turned on his left side, had a rapid collapse and died in 45 minutes.

Case 2. Female, aged 53. Operated on for acute suppurative appendicitis; seemed good operative risk, made uneventful progress toward recovery until the seventh day; suddenly developed evidences of pulmonary embolus and died in six hours. These two septic cases were operated on shortly after entering hospital, but there were no contraindications to operation.

Case 3. Female, aged 70. Gastro-enterostomy for almost complete obstruction of the pylorus from carcinoma; succumbed to pulmonary embolus five hours after operation.

Case 4. Female, aged 33. Caesarean section for central placenta previa at the eighth month. Recovery was stormy, with much vomiting and some abdominal distention due to acute dilation of the stomach which subsided about the fifth day, but on the ninth day acute pulmonary signs appeared and patient died in 24 hours from pulmonary embolus.

Case 5. Male, aged 33. Interval appendicitis and very large left side varicocele. Had suspicious pain in the chest on the third day, which subsided shortly, though pulmonary embolus was suspected at the time. He left operating table in a very profuse perspiration, perhaps evidence of a low

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resistance; on the tenth day developed acute pulmonary embolus and lived but 35 minutes.

Case 6. Female, aged 58. Diaphragmatic hernia; spent several days in hospital for x-ray examination and preparation. Was in good physical condition. There was little difficulty in closing a very posterior opening in the diaphragm. There was in addition a definite stenosis of the pylorus, due to cicatricial contraction of an old gastric ulcer, for which a posterior gastric enterostomy was made. The patient proceeded with a fairly normal convalescence, except for a slight temperature around 100 for several days. Wound healed by primary intention. On the seventeenth day after operation pulmonary embolus developed and patient died in 36 hours. Post-mortem verified the diagnosis.

In all these cases ether and gas and ether were used and in all except one, embolus developed many days subsequent to operation, and it would seem that the influence of the anesthetic was remote.

The smaller emboli that leave the field of operation during its progress are, I believe, the determining factor in the development of post-operative pneumonias, and if accompanied by sepsis localized infections ensue. Hypostasis caused by these small emboli also helps to foment the process. Trauma of the field of operation, in the way of undue manipulation of the region is undoubtedly a large factor in the production of embolus, and this with poor hemostasis adds to the danger. A very important factor is the degree of mobility of the region operated on, as shown by the larger percentage of postoperative complications in abdominal surgery, especially in the upper abdomen. A lowered vitality of the patient, chilling during the operation, and emergency operation without preparation, add much to the danger, as shown by statistics in clinics where a great deal of emergency surgery is done.

The problem of anesthesia as bearing on this situation has never been given a great deal of consideration but there is no doubt that it is a factor, as operations made under local anesthetic or gas, must be done with gentler manipulations to the parts and the period of narcosis is shorter in gas and nil in local anesthetic. Therefore, if hypostasis plays any part it can be eliminated to a great extent. Pulmonary irritation is less with gas and local anesthesia and aspiration of material less likely. Most statistics fail to show any difference in the complications following the different types of anesthetic used but this may

be accounted for by the fact, that in many clinics local and gas are used only in sub-normal risks and in cases which have pre-existing pulmonary complications.

In conclusion: I would say that reports show that one out of every fifty cases operated on develops some type of pulmonary complication and one out of every 150 to 175 dies of such complication, with a much higher percentage of mortality in the abdominal operations. That embolus is a decided etiological factor in these complications, with mobility of the area operated on, trauma and sepsis contributing.

Efforts made to eliminate these factors by selected anesthesia, by prevention of undue exposure of the patient to chilling and by careful hemostasis at the time of operation may partially control them.

LIPOMA OF THE KIDNEY.*

J. W. ALEXANDER, M. D.

CHARLESTON, ILL.

A lipoma is a tumor composed of fat tissue. The gross appearance in most of these tumors is characteristic. They form firm, elastic, rounded, usually multilobulated growths, which without much encapsulation are sharply circumscribed from the surrounding tissue. Their size varies from that of a pea to masses weighing many pounds which produce serious results from weight and pressure. The consistence is usually that of normal fat tissue, but this density may be reduced by secondary changes, or, more often increased by admixture with fibrous tissue or by forms of metaplasia. The color is usually that of normal fat tissue, but xanthomatous changes may yield an orange yellow tint, or various secondary processes may give corresponding alterations.

Lipomas exhibit a striking connection with nutrient blood vessels, each of the multilobules growing about a bunch of the main vessels. Lateral anastomoses of their vessels are scanty so that the tumor grows expansively and is readily shelled out of its position. With pure lipomas appositional growths are not observed, but this rule is less rigid for mixed lipomas and liposarcomas.

The microscopic structure resembles normal

*Read at the 71st annual meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

fat tissue, but the lobules vary greatly in size and the supporting stroma is irregular in distribution. The cells may be over-distended with fat, or may produce the smaller type of embryonal fat tissue and often there are areas of polyhedral cells on which the fatty deposits are incomplete. It is from such cells lying in isolated foci along the vessels that the growth of lipomas chiefly occurs. In some of these foci an alveolar structure may be produced by polyhedral cells with incomplete fat deposits. Occasionally the growing cells contain granular lipid pigment and strongly resemble xanthoma cells, and this character may be diffused throughout rather large lipomas especially about the kidney. The blood vessels are usually over-abundant, and many cellular arterioles are found in the stroma running out into the lobules and dividing into capillaries. Secondary changes in lipomas are common in advanced stages of growth. One of the most frequent is a mucinous degeneration which occurs in atrophic and edematous areas and may reach extensive proportions which constitute a true myxolipoma. Cysts form in lipomas from the fluidification of the central portion of large lobules, producing areas of fluid fat, which are said to result chiefly from trauma. Lipomas may exhibit an excess of fibrous tissue, resulting from atrophy of fat and fibrous replacement, or from admixture with true fibroma. In a considerable class of tumors all of the cells are abundant and one has to deal with various types of lipomas. Many interesting features are occasionally observed in the clinical course of lipomas. Some internal growths as in the thorax, abdomen or cranium reach such a size and exert such pressure as to cause serious symptoms or even death, with symptoms referable to the affected organ. Very large lipomas seem to be capable of diverting the nutrition of the body and inducing emaciation. Owing to a peculiar fat discrasia of some people, hundreds of fat tumors may appear on or in various parts of the body.

Into the etiology of lipomas many factors seem to enter. An hereditary influence must be recognized. The occurrence of multiple symmetrical lipomas has suggested, to many, a connection with the peripheral nerve. Virchow was able to show that atrophic lymph nodes were common to lipomas. In some conditions a disturbance of the thyroid and pituitary glands

seems to be an important factor. A congenital tissue predisposition seems to be an essential factor in the origin of many lipomas of the internal organs, as in the kidney, for misplaced islands of adrenal rests and capsular fat are held to give rise to tumors. In the kidney small circumscribed multilipomas occur beneath the capsule or replacing a portion of the cortex, or reaching to the medulla. The structures of these tumors vary. Some of them are composed of pure fat tissue, others contain considerable fibromatous tissue, so that Virchow and others have spoken of them as fibrolipoma. In either case the light yellow translucent color seems to distinguish them from the more common struma suprarenalis of Grawitz, which is opaque and of an orange tint. In not a few cases smooth muscular tissue has been found in such tumors and Selter, Rubrash and Manasse have described them as myofibroma; while in some cases sarcomatous features are observed. Borst and Selter describe symmetrical lipomas of the kidney chiefly of the upper half of the organ. In Borst's case double lipoma was associated with fibromuscular tumors of the same portion of both kidneys. All of these features point to a congenital and embryonal origin of these tumors, but the exact nature of the embryogenic disturbance is at present undetermined. That they may be connected in some way with Grawitz's struma suprarenalis is indicated by the presence of adrenal tissue in some cases, and by the occurrence of curious, complex, chiefly liposarcomatous tumors of the kidney.

Partial or complete replacement lipomatosis of the kidney has been observed in a series of cases reported by Lacrampe-Loustan. Royer and Epstein have described such cases in which no trace of renal tissue remains while the intact capsule of the organ inclosed pure fat tissue. Selter called attention to the fact that in most of these cases a single calculus occupies the renal pelvis. The proliferation of the fat begins in the pelvis and the adipose tissue and follows atrophy of the renal parenchyma.

Perirenal lipomas containing connective tissue, mucoid areas, and sarcomatous areas, occur in infants and adults, and may reach very large dimensions. In advance stages they pass as retroperitoneal lipomas. Lawyers describe a

tumor arising at birth and reaching a weight of six pounds at seven years. Windle's liposacoma weighed fifty pounds. Adami describes two very large tumors, composed of adult fat tissue with cellular stroma. The growth of these tumors is usually slow unless they take on a sarcomatous growth and then the progress is usually very rapid.

Case 1. In 1915 a restaurant owner, 30 years old, came to the office for treatment. He was pale, but in very good flesh. Had always had more or less trouble in the upper lumbar regions; at times would be unable to work. Twelve weeks before coming to the office he began to have a sore, uneasy feeling, first in the left lower quadrant, later in the left hypochondrium, left hip and over the region of the left kidney in the back. He also had numbness in the leg, extending to the groin. For a long time he thought that he noticed something wrong in the left hypochondrium, but was afraid of an operation and would not go to a physician. He had an obstinate constipation, bowels moved scantily with a cathartic, but nothing abnormal about the stools. Examination showed pallor of the mucous membrane, marked resistance and tenderness in left upper quadrant and considerable tenderness over anterior muscles of the left thigh. After relaxing the patient with a hypodermic the patient showed a mass filling the whole left flank from front to back, slightly movable and slightly tender. Blood pressure normal. The inflated colon lay in front of the mass. Forty-five ounces of urine in 24 hours, normal in color; specific gravity 1.018; no albumin, no sediment. Physical examination was normal. Leukemia could have explained the pallor, but even in advance of the blood examination leukemia was practically excluded by the fact that the colon passed in front of the tumor. The blood examinations were also negative.

Cancer of the splenic flexure of the colon might produce a mass in this location and might account for all the pain of which the patient complained. In this case there were no symptoms of intestinal obstruction such as visible peristalsis, intestinal noises, growths, or occult blood in the stools, or diarrhea. Constipation was the only symptom present and was easily due to other causes.

This tumor was in the position usually occupied by growths arising from the kidney. Tuberculosis, cysts and neoplasm were considered. Against tuberculosis was the fact that there was no fever and no pyorrhea, besides the amount of pain and the area covered was greater than usually found in renal tuberculosis. This also applies to renal cysts, which often obtain a much greater size than the mass here, and produce no pain whatever. Moreover, most chronic renal cysts produce a high blood pressure which did not exist here. New growths of the kidney might have explained all the symptoms, but we would in all probability have

found hematuria. Two weeks after our first examination this patient was operated on through the lumbar region and a rather large lipoma of the upper portion of the kidney was found. This patient had an uninterrupted recovery.

Case 2. In 1919 was called in consultation to operate on a housewife aged 65. The patient's family history was negative. In 1910 she fell down the cellar steps and hurt her right side very severely. Since that time she has complained of a great deal of soreness in the right hypochondrium, which was greater at night when changing her position. Occasionally she would have severe pains in this region followed by vomiting and accompanied by fever and chilliness. There had never been any jaundice. For six years this woman had been treated by the osteopaths for chronic pleurisy.

Physical examination showed no jaundice; pupils, glands and reflexes normal. Arteries rather hard, with a fatty degeneration of the heart. Blood pressure 160. In her right upper quadrant was an irregular smooth rounded mass, descending with respiration and slightly movable from side to side and from above downward. The mass was quite tender and dull on percussion. The upper border of the liver dullness was on a level with the sixth rib. The blood and the urine were negative. There had been a little elevation of temperature. No fluctuation or elasticity were detected, and bimanual transmission to the back was not clear. The mass was believed to be a kidney, but the history was that of gallstones.

Where a fat woman of middle or advanced age complains of stitchlike pains in the region of the gall bladder, extending over a period of years, one must of necessity consider gallstones first. One usual and rather inexplicable feature of the case was the pain associated with the change of position. Moreover, one does not expect a distended gall bladder to be palpated bimanually as an enlarged kidney is, with one hand in the lumbar region below the last rib. An incision was made through the right rectus down over the gall bladder, which was found to contain one very large stone. As the gall bladder was diseased and not functioning, it was removed. The main tumor was now found to be retroperitoneal and in the kidney. The retroperitoneum was opened and the enlarged kidney removed. On section it was found to contain a cyst cavity, entirely surrounded by lipomatous tissue. No recognizable kidney substance was found. This patient was up and about in two weeks, but died from a broken compensation six weeks later.

Case 3. A farmer of 55 came to us in 1918 with the following history: Some years before he had noticed an easily movable lump the size of a hen's egg just below the left costal border. This had gradually grown until it was as large as a good-sized grape fruit. He had worked steadily until about six weeks before, when he strained himself while working with a team of horses. Since that time he had been steadily going down hill. The

mass was quite tender on pressure and there was a constant dull ache in it, with occasional attacks of sharp pain radiating to the back and left groin. The pain had no relation to food or the passage of urine or feces. He had lost strength; appetite was poor and bowels constipated. Physical examination showed some emaciation, mucous membranes slightly cyanotic, glands somewhat enlarged, chest negative. In left hypochondrium was a smooth, hard, rounded, slightly movable tumor, filling out the flank and pushing up the ribs. Impulse exerted upon it was felt in the left lumbar region. The inflated colon lay between the mass and the abdominal wall. The urine showed numerous pus cells and a good deal of mucus, but no blood. The blood was normal, blood pressure 140 and 80. No fever. Wassermann reaction negative. Feces negative. Apparently the lump had existed in this region at least four years, although the patient's health was until six weeks ago good. It is hardly probable that the strain mentioned in the history had anything to do with making the patient's health run down. It was altogether probable that the change which occurred six weeks before he came to us was not due to any external cause, but rather to the natural progress of the disease. We believed that the disease was connected with the kidney, from the fact that we had no symptoms referable to any other organ which most often cause symptoms in the left hypochondrium, namely, the stomach, the spleen, and the colon. Assuming then that we were dealing with the renal tumor, associated with pus in the urine, pyonephrosis is the first thing to be considered. The absence of pus and leukocytosis are somewhat against this assumption. It is also unusual to encounter a case of pyonephrosis at the age of 65. The same reasons just given hold against tuberculosis. Hyeronephrona was the most probable diagnosis. The absence of hematuria does not militate against this diagnosis, as blood appears in the urine in these cases only when the growth reaches the renal pelvis. The abdomen was opened and the lipoma the size of a large grapefruit presented in the left hypochondrium. The tumor was removed and drainage made. An examination of the tumor showed it to be a lipoma of the cortex, and from its location under the capsule where adrenal rests are found, and from the sharp encapsulation separating the tumor from the renal parenchyma, and from the resemblance of the structure to that of the adrenal this lipoma was probably derived from an adrenal rest.

Case 4. In 1917 a man of 50 was referred to us who had been passing blood constantly with the urine for three years. If at any time this blood stopped for a few hours, he had pain in the left lumbar region, relieved when it appeared again.

The physician who referred him had been able to palpate a tumor in the left hypochondrium for a period of eighteen months before we saw the patient. He had associated this mass with the

kidney, and had treated him medically, but with no result. Four months previous the tumor had commenced to enlarge, and had grown so rapidly that the man was forced to give up his work as a farm hand.

Physical examination showed emaciation, anemia, temperature 99 to 101. In the left hypochondrium was a large, nodular, insensitive mass, extending below the ribs, descending with deep inspiration and slightly movable. Urine bloody, but otherwise normal.

The renal pain and tumor in the renal region make it altogether possible that the trouble was with the kidney. Tuberculosis, stone and neoplasm are the chief possibilities. Stone never produced a tumor having these characteristics. Tuberculosis might give rise to fever, and renal tumor such as we had here, but we would have pyuria and less profuse bleeding and more bladder symptoms, such as frequent urination, burning and pain.

Prolonged hematuria and pain relieved by bleeding is distinctive of renal tumor. Indeed, the most prolonged cases of hematuria usually turn out to be due to renal neoplasm.

An operation was made through an abdominal incision and the entire tumor, including the kidney, removed. The tumor was a lipoma, which was undergoing a sarcomatous degeneration, which accounted for its rapid growth of the last four months.

The continuous hematuria was caused by this tumor encroaching on the pelvis of the kidney. The patient returned to his former home in the east shortly after he was up and about and we lost track of him and know nothing concerning his post operation history.

THE COUNTY SECRETARY AS VIEWED BY THE COUNTY SECRETARY*

ELIZABETH B. BALL, M. D.

QUINCY, ILL.

The only possible interpretation to give this title is:—myself as viewed by myself—and, it seems to me the one who chose this subject was most unkind, as it is much easier to describe oneself, as seen by others, than to place our individuality upon the examining table, inspect, palpate, percuss carefully, and diagnose justly.

Eleven years ago when the secretary of the Adams County Medical Society resigned and placed my name in nomination, a veritable tremor went through my body and with haste and decision, I declined the courtesy extended to me. Then said my colleague, "Probably, Doctor Ball will be willing to accept this office when I tell

*Read at the Secretaries' Conference, at Springfield, May 17, 1921.

her that one of the best secretaries in Illinois today is a woman (Doctor Marion K. Bolles, of Joliet)."

This statement did much to calm my fears, the ballots were passed—the result you know.

I had the pleasure of attending the first secretaries' conference which was held in Aurora, Doctor E. W. Fiegenbaum presiding. Here many new ideas were developed and old ones made more emphatic, such as, see that your society has luncheons, banquets, picnics, etc.—in other words, "Feed the Brutes" if you desire a good attendance at meetings. Here for the first time I saw and read that wonderful publication, "The Madison County Doctor" and received so much inspiration from it that, in a couple of months the *Adams County Medical News* appeared and since it was an innovation in my county, it was much appreciated and received many favorable comments. However, it is with regret, that I must tell you this little bulletin has not increased in size, but still contains only four pages.

At different times when finances in the society were low I suggested to cease publishing this little messenger, but without success, thus proving that at least it has had its effect.

That oft-repeated remark, "If you want to have a good all round county society you must have a good, live secretary, one who is up and coming, etc."—is all very well, but the secretary alone cannot do everything regardless of how many wonderful qualities he or she may possess; there must be cooperation on the part of the members, especially the officers and the program committee. Right here is a point which I should like to have discussed at the close of this paper. Is, or is not the secretary handicapped by having a special program committee?

Probably most of the secretaries have had my experience. Unless the program committee is composed of deeply interested, live members, you yourself have all the work to do. When you try to get them to attend a meeting the reply is, "Oh, you go ahead, you're doing all right." We'll say they are most congenial and kind but is this spirit helpful to the society and doesn't it sort of spoil our "pep."

This year I increased the number on my program committee from three to five members. So far, they have attended every special meet-

ing, have demonstrated a keen interest as well as showing a willingness to foster big plans for the future. If anyone or all of, you receive an invitation to a Medical Chautauqua, to be held in Quincy under the auspices of the Adams County Medical Society, kindly give the credit for the same to this energetic committee.

To be the secretary of a county medical society demands more than the attendance at every meeting, taking and copying minutes, writing receipts for dues, sending out notices of meetings or editing bulletins, etc. One must possess business ability, for you know physicians are said to be poor financiers—and there is always the fellow who forgets his financial obligations to his society, not intentionally, but because there are so many, many things in his life of so much more importance. And then, well the secretary will look after it anyhow, so why worry.

According to the Constitution and By-Laws of my society, written notices are to be sent out, one month apart, reminding the delinquents that unless they pay by such and such a time they will be dropped from membership. On the whole this is not a good plan but a waste of energy, paper and postage, for the member receiving such a notice either becomes quite indignant or else tosses it aside for future consideration with the thought, "Oh well, the secretary will notify me again," and thus we either lose a member or we have one who is very indifferent and neither type is desirable. The personal touch is the thing that counts after all, in other words it is better for the secretary to take the time to call on Dr. So and So, and in a tactful good-fellowship manner tell him he owes his dues. In this way we have the opportunity to bring the society to the man. We cause him to remember there is such a thing as a county medical society, that this society holds regular meetings, social gatherings, etc., that it exists for a definite purpose; further, that there is in existence a state society with which he is affiliated through his membership in this county society which he has totally or partially ignored. Also, that this state society sends him a good scientific medical journal once every month and probably this too has been disregarded. Further, that this state society protects him and his interests in a medico-legal manner and even offers him defense in case of

suit for mal-practice, and in return for all these advantages he is asked to attend meetings at regular intervals and in addition thereto, the small sum of \$3, \$5, \$8 per year, as the case may be.

These are just a few of the thoughts brought to the mind of this indifferent member by one of the so-called live secretaries.

This member may still absent himself from meetings but at least, we have the satisfaction of making him a little uncomfortable and of having a booster instead of a knocker.

This county secretary we are viewing makes a special effort to know each and every member of his society in the entire county, to make the timid, backward, occasionally attending member feel welcome when he does come; he is willing to serve on committees, to assist here, there and everywhere, to be the instigator of an all-round good time at various times during the year, in short, he lives for the society and does everything to promote and foster its interests.

As to the scientific part of his duties which after all expresses the real purpose of a county medical society many things must be taken into consideration. 1. The material he has in his own society and whether or not the members are willing to listen to and discuss a paper written by a fellow member or as is often the case, "the man from home" does not bring out this or that member. 2. Is the location such that a city nearby can furnish medical men well equipped with scientific knowledge along special lines together with abundant hospital and laboratory facilities, where clinics may be held, and will this plan meet with approval from the members of his society. It is impossible to please each and everyone, so we cater to the will of the majority.

Another good thing this county secretary does is to have at least one business meeting a year when the physician as a business man is discussed.

Sometimes in spite of the most careful thought and the closest attention to duty, the society does not seem to prosper; this determined and optimistic secretary will keep on persevering, but probably along different lines. He will get in touch with other county secretaries in his effort to gain new ideas, and if they seem feasible in his case will adopt them or at least give them

a trial. He will also attend the secretaries conference held in connection with the annual State Society Meeting every year and here he will state his problems and get a possible solution of the same.

In conclusion, the County Secretary as viewed by the County Secretary is medically speaking, a victim of mal-nutrition whose errors in diet are corrected or uncorrected by the whims and caprices of the members of his county society.

THE COUNTY SECRETARY AS VIEWED BY THE COUNTY PRESIDENT*

F. A. NORRIS, M. D.

JACKSONVILLE, ILL.

The County Secretary in the eyes of the presidents of county medical societies is looked upon as the main cog of a wheel that has many weak points. The secretary, as I have seen him is always a hard worker and arranges and takes care of most of the work of the society. His job is many times a thankless one and often little appreciation of his efforts is shown by attendance or other co-operation.

All members are willing to do anything they can in the interest of the society, provided such efforts do not greatly inconvenience them.

I remember the advice of one of the greatest teachers of surgery who said to me "Doctor, attend every clinic you possibly can; put yourself out financially or otherwise to attend them at regular intervals; you can always learn something, either things to do, or things not to do." This would be good advice to give to members who never attend meetings. No paper, no matter how important, can give them any new ideas and therefore their faces are never seen at meetings; they miss making intimate professional friendships and seem to forget every thing pertaining to the profession but the financial side. Of course many men read the current medical literature; but a doctor needs the stimulus that medical societies, clinics and contact with his fellow workers can give him, if he is to advance. Medical science is progressing too rapidly today to admit of any stationary position; its either forward or backward.

The county secretary tries in every possible

*Read at the Secretaries' Conference, at Springfield, May 17, 1921.

way to bring the members to meetings and clinics but his failures are appalling. At our medical societies the same members are in attendance at every meeting and we rarely see a doctor from the towns in our county. We have made them officers, put them on the program and have held clinical and literary meetings combined, with no permanent success in swelling attendance.

There is no doubt that the combined meeting gives more success than any other effort. We are all anxious to have our medical societies successful but members and officers seem to consider it the duty of the secretary to make them so and fail to give him the proper and constant support.

To my knowledge Macoupin County has been able to have record attendance from all over the country by having their meetings in a different town each month. With all the energetic men in our profession it is a simple matter to arrange educational programs, so that the secretary is not blamed for his efforts in this direction, but as all the work of the society rests on his shoulders, we feel justified in allowing him all the blame for lack of attendance.

THE COUNTY SECRETARY AS VIEWED BY THE COUNTY SECRETARY*

T. D. DOAN
SCOTTVILLE, ILL.

"Oh, wad some power the giftie gi'e us
To see oursel's as others see us."

In placing the mirror of self-observation before our own examination the natural final result will either be a pessimistic or an optimistic mental picture.

Because of the relation existing between the members of the County Society and the Secretary, it is natural for the Secretary to feel that a large part of the success of the Society depends upon his energy and enthusiasm.

Often times it is necessary that the Secretary have considerable backbone to use in connection with the energy necessary for the successful work of his official duties and figuratively speaking we might say that to obtain the very best results this backbone should be "brought to the front."

If the Secretary is of the pessimistic order, the members of that Society will soon absorb his spirit and general depression, and lack of vigor and energy will necessarily prevail.

If the Secretary is of an optimistic turn, the members will become enthusiastic, energetic and work with the idea of making the Society a successful one.

One of the most common besetting sins of the unsuccessful Secretary is a habit which is so easily acquired and with such great difficulty broken—that of not giving an immediate reply to requests for information.

All those who have served as County Secretary for any length of time are well aware of the fact that one of the most difficult problems of handling the duties of the office is to secure an immediate reply from members of the Society.

This is not due to lack of courtesy, or willingness on the part of the physician to co-operate with the officials of the Society, but rather it is largely due to the kind of work of the physician, which work has apparently converted a large majority of those engaged in this noble profession into non-business individuals whose high aim is to relieve suffering and save human lives.

The very foundation of medicine as it exists today is of such a character that the physicians, by their preventive medicine, high ideals of ethics, and self-sacrifice, deprive themselves of much of the pleasure, both social and remunerative to which they are entitled.

Personal experience reveals the apparent fact that the duties of Secretary, such as aiding in the preparation of programs, answering correspondence, issuing a bulletin and other more or less interesting duties, are practically performed by the general practitioner as easily in the month of February, when the professional work is often overwhelming, as they are in the month of June when one has plenty of time for propagating piscatorial exaggerations, playing golf or other like recreations.

Let us as members, let us as County Presidents, tell to our Secretaries at home and let us as Secretaries take home the thought that it is not that we do not have time to do our official work as Secretaries but rather it is the fact that we fail to do it "Now."

*Read at Secretaries' Conference, at Springfield, May 17, 1921.

THE COUNTY SECRETARY AS VIEWED BY THE MEMBER*

CLIFFORD U. COLLINS, M. D.

PEORIA, ILLINOIS

On reading the program of this afternoon's meeting, I felt that there was something lacking in it. After reading it over three or four times, I discovered what it was. There should be a paper on "The member as viewed by the secretary." I rather imagine a secretary could say some interesting things about the members.

The member usually first comes in contact with the secretary on the day of election, when some other member evinces a desire to have himself elevated from the ranks of mere members to the exalted position of secretary; or is boosted up anyway whether he desires it or not. Possibly there is a contest and more than one misguided member aspires to the position of secretary. And here is where the member nearly always makes a mistake. He usually votes for the candidate he considers his best friend, and this is usually a member that he does not consider a close competitor; whereas he should vote for his enemy, who is usually his closest competitor. If the enemy should be elected he will be seriously handicapped during his term of office. The duties of the office will undoubtedly take a great deal of his time and attention, which must be diverted from his professional activities. But the average member can be usually trusted to make the mistake of voting for his friend. The candidate who is predestined and fore-ordained (you will observe the evidence of my early Presbyterian training) to be secretary will be elected and is then in a position to be "viewed" by our member.

If our member thinks about it at all, which he probably does not, he thinks that the secretary is to be envied. He will have a front seat up by the President, and all he will have to do, will be to write a few notes about what takes place at the meeting.

I am rather glad that Doctor Doan asked me to take a place on this program and gave me the subject that he did. It so happens that I have served a term as secretary of a county medical society and believe I know something of its duties and privileges. The society only allowed me to serve them one term; probably for good and suffi-

cient reasons, but I served long enough to retire with a very wholesome respect for the job.

At this stage I find that I require a little more latitude in which to say all I want to say, so I am going to tack on an "S" to my subject and make it read, "The County Secretary as Viewed By the Members" instead of "member." I hope this will meet with the approval of your secretary, but it makes very little difference anyway, because it is already done; and in this, you see, I am running true to the form of the average member.

The next point of contact with the secretary is the notice of the next meeting. Some members want to receive their notices several days in advance of the meeting, so that they can make their plans accordingly, and some want their notices sent on the day of the meeting so they won't forget it. The secretary will probably choose a happy mean between these two extremes. I say "happy" advisedly, from the view-point of the members, because it gives one class a chance to complain that the notice was sent so far ahead that they forgot it, and the other class can say that the notice came so late that they had already made other arrangements. At any rate one thing is certain. If the attendance is not good, it is the fault of the secretary. Ask any member of any society and he will tell you that the attendance depends on the qualities of the secretary.

Another point of contact is the notice of dues to be paid. This notice disturbs the average member very little, if any. It is clearly the duty of the secretary to see that the local society is kept in good standing on the books of the secretary of the State Society, so why should the member worry. Here again some members want their notices sent frequently so they will not forget to pay—sometime; and others only want one notice sent, so they *can* forget to pay and lay the blame on the secretary for not notifying them. If the secretary sends out frequent notices, some members are sure to get "sore" and beligerently demand if he thinks they are not "good" for the amount; whereas, if he sends out only one notice for dues and allows the membership of those, who fail to pay, to lapse, an awful uproar will go up from those who have forfeited their membership. From the viewpoint of every,

*Read at Secretaries Conference, at Springfield, May 17, 1921.

member a secretary is very inefficient if he does not collect dues from all the other members, and keep all the members in good standing with the State Society.

Another possible point of contact is the program. The secretary may ask our member to prepare a paper for a meeting. He will probably feel pleased at the invitation, and in the first flush of pleasure may accept. If he refuses, it is all right, because any one knows that it is the duty of the secretary to furnish a program for each meeting. No one claims that the program is any part of the duty of a member. If he accepts, he is undoubtedly conferring a distinct favor on the secretary. He may feel so good over this aid he is giving to the secretary that he may forget all about it until the day of the meeting. If he does this, it is clearly the secretary's fault. The secretary should have jogged his memory and reminded him that he was on the program, several times before the day of the meeting. I am sure every member will agree with me in this. I am rather sorry that this is a secretaries meeting, because I am afraid all of you are not in harmony with all that I am saying. I am sure a meeting of members would agree with me in every particular.

The members expect the secretary to keep an accurate account of the proceedings, and rightly so, because that is evidently a part of his duties. If there should be a "fight" on at one of the meetings, the secretary is expected to have the minutes of that meeting read satisfactorily to both factions in the row. This may be a little difficult, but, surely, it is not too much to expect of a secretary.

I have touched upon only a few of the duties of a secretary as viewed by the members. In order to prove that I have only mentioned a few, I am going to read from the constitution of a county society that I picked up the other day. This constitution was evidently adopted by the members and shows to some extent what the members expected of their secretary.

"Sec. 3. The Secretary shall record the minutes of the meeting in a suitable book; receive and care for all books, records and papers belonging to the Society, including its charter; collect admission fees and dues of applicants, keep account of all funds of the Society which

may come into his hands, and sign all documents and transfer cards. He shall notify the members of regular and special meetings, conduct the necessary correspondence for the Society, and discharge such other duties as are customary, or may be required of him by the Constitution and By-laws of the Society. He shall make and keep a correct list of the members of this Society in good standing, noting of each the correct name, address, place and date of graduation, and date of his state certificate or license to practice medicine, and in a separate list he shall note the same facts in regard to each legally qualified physician in blank county not a member of this Society. It shall be his duty to send a copy of such lists, on blank forms furnished him for that purpose, to the Secretary of the Illinois State Medical Society, at such times as may be designated by the latter. In making such lists he shall endeavor to account for each physician who has moved into or out of the county during the year, stating, when possible, both his present and past address. At the same time, and with his reports of such lists of members and physicians, he shall transmit to the State Society an order for the amount due to the latter from the blank Medical Society. (Reports and assessments required between the 1st and 10th of April.)

Sec. 4. The Secretary shall notify all members when they become delinquent, and quarterly thereafter until the delinquency is disposed of by payment or otherwise; prepare and present at the annual meeting a statement showing the condition of the treasury, and make such payments as are ordered, over the signature of the President."

This society did not expect the secretary to do all these things and go unrewarded. Not at all! The next paragraph in the constitution clearly shows this.

"Salary. For these services an honorarium of Sixty Dollars shall be voted to the Secretary annually by the Society."

I do not know why they did not insert the word "magnificent" in front of "honorarium." Probably it did not occur to them.

At the end of his term, the secretary may or may not want another term. However, he will probably have nothing on the society at that. The members may or may not want him for

another term, no matter how efficient he has been or tried to be.

While writing this paper I have wondered why any member ever wanted to be secretary. I tried to think back and remember why I wanted to be secretary at one time. One thing, I was considerably younger and more inexperienced, I hope, than I am now.

But the office of secretary with all the labor and hard work and lack of appreciation has its compensations. It means a close association with all the members, and doctors are an agreeable class of individuals to be associated with, when once you know them well. A term as secretary of a medical society is a wonderful experience, if the secretary preserves his sense of humor. A successful secretary has a right to feel exceedingly proud, because he has solved knotty problems and has overcome difficulties. In other words he has achieved. When he has kept a complete record of the proceedings of every meeting; when he has kept an accurate account of the payment, or non-payment, of the dues of each member; when he has arranged a program for each meeting and has seen to it that the essayist for each meeting thoroughly understands the exact date; when he has arranged for a projecting lantern for each night that it is needed; when he has attended to a thousand and one things that go to making a successful year for the county society, he will have acquired a patient attention to details that will be valuable to him for the rest of his life. He has rendered great service to his fellow workers in the same field, and in this last thought, I think, lies the reason why some members aspire to the office of secretary. It is a wonderful opportunity for service, and in the words of the Rotarian motto, "He profits most who serves best."

THE COUNTY SECRETARY AS VIEWED BY THE MEMBERS*

M. HERSCHLEDER, M. D.

MT. OLIVE, ILL.

The back bone of the County Medical Society is the secretary. His efficiency determines the strength of the medical profession to handle today's medical problems, made pertinent by unscrupulous politicians working for the interests

of osteopaths, chiropractors, Christian Science healers and all other cults. Our hope against these evils lies in the efficiency of the secretary of the County Medical Societies.

The secretary should be a man inspired with a zeal for the unity and the good of the profession. He must be a good fellow and know how to arouse good fellow-ship among the physicians and inspire lofty professional ideals. He must also be a good politician, a business man, and a collector.

He must have a sincerity of purpose and be a tireless worker.

The county secretary must so arouse the active members of the County Medical Society to the advantage of a professional unity, that they in turn will pass the enthusiasm along to every physician that they come in contact with. We need a strong unity among us, the same as in any other occupation. If we can get together away from business, all the petty misunderstandings are forgotten and we come back to work more capable of unity. Here again we need an efficient secretary to be able to get all the men out to the County Medical Meeting. We need a man who will furnish us with a live up to the minute program. A good meal before the real business of the meeting will assist in making resolutions, never to miss another meeting. Frequently he should hold symposiums and get them all interested. The secretary should have a good deal of the school master about him. He should draw the members out, for after a man has taken the floor and accredited himself by disclosing some of his acquired common sense, since leaving college, he will feel a personal interest in the medical society, and no doubt from this time on be a regular attendant at the medical meetings. Macoupin county has just such an ideal secretary. Although it takes an entire day to attend a medical meeting on account of the poor roads and the limited transportation facilities, he has increased the attendance from 7 per cent. to 50 per cent. and made a live organization out of a dead one. He has succeeded in interesting the individual physician in the immediate needs of the profession. At the close of our meetings we always leave with a desire for more.

As regards the poor secretary. We can't afford to keep him. If he has out-grown the

*Read at Secretaries' Conference, at Springfield, May 17, 1921.

needs of the profession, you haven't. If he is a dead one, he will run a dead society. If he is behind the times, he has no place in the profession of medicine. If he is careless and lazy, the society will not thrive. In other words if the county medical society is not up to the standard, look into the office of the secretary. Analyze the man that holds that office. If he isn't up to the minute attend the next election, and if no better man is present nominate yourself.

WHAT THE SECRETARY OF THE COUNTY MEDICAL SOCIETY THINKS OF THE MEMBERS*

W. E. SHASTID, M. D.
PITTSFIELD, ILL.

I do not know that I can say anything at all with reference to this subject. The members of the county society all look pretty good to me. I do not have any trouble with the members of my county society. We get along finely. I have to urge them along a good deal occasionally just like you do. I have to give them a talk now and then to keep them in good humor. I am a pretty fair collector. If I have a member who is a little slow about paying his dues, I tell him that Dr. Gilmore wrote me that the dues have to be paid by a certain date and that I have to make good with Dr. Gilmore. That is a pretty good talk and is usually efficient. I can offer it to you if you have not already tried it.

The members of the society whether they belong to my county or to some other county have always looked to me like good fellows. I am always glad to meet them. I always try to come to the State Society to make new acquaintances and renew old ones.

There is only one criticism I can make on the general profession as to the appearance of their societies and that is one that all of the secretaries find out sooner or later, namely, the matter of indifference. We have to break down that spirit of indifference and try to get them to take an active interest instead of looking at the meeting in a cold, unfeeling way. After you have been a county secretary for some years it becomes a little bit easier to perform those duties and you can run along with a little better efficiency than you could in the earlier days. I

know that I am speaking to some very efficient county secretaries and some of those who preceded me have had more experience than I have had and can give you more valuable points than I can. I did not know Dr. Chapin was going to call on me. I thank you.

THE COUNTY SECRETARY AS VIEWED BY THE MEMBERS*

F. A. RENNER, M. D.
LEBANON, ILLINOIS

The late Dr. H. C. Fairbrother of E. St. Louis a few years ago, gave his opinion of the Ideal Physician. Some of the essential qualifications of His Ideal were:

1. The Industry of the Bee.
2. The Endurance of the Athlete.
3. The Diplomacy of the Statesman.
4. The Wisdom of the Philosopher.
5. The Manners of the Gentleman.

These points can be easily applied to make up the Ideal Secretary of a County Medical Society. In fact I believe the nearer the Physician approaches the Ideal—the better Secretary he will make. The Secretary serving his County Society simply because he has been elected—not with a love for the work nor a desire to serve, will make a very ordinary officer—because to him the duties will no doubt be considered irksome.

Let us consider some of the points of the Ideal Physician as applied to the County Secretary.

The Industry of the Bee: Ever ready to do a duty when called. Standing of members in the Society, reports ready when called for, correspondence promptly answered—all call for an industrious man. I find it easier to write two letters a day than it is to write twelve on Saturday. I have had in my medical life to deal with several County Secretaries. I recall placing my transfer from one County Medical to another. After waiting about sixty days I wrote the County Secretary as to my status—received no reply; waited another month and wrote again—again no reply. Being in the town where the Treasurer lived I called him over the telephone and was told my name had not been given him as a member. I then wrote the President of the Society who promptly informed me that I had been duly elected to membership some time pre-

*Read at Secretaries' Conference, at Springfield, May 17, 1921.

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vious, and that the Secretary had so notified me. About ten days later I received notice from the Secretary.

"Seest thou a man diligent in business." You know what Poor Richard said.

The Secretary might be a very busy man and called on to do his duty as Secretary even while very tired and worn—then comes in our second essential—Endurance of the Athlete.

Diplomacy and Wisdom, if essential to a physician, are as much or more essential in the make-up of the County Secretary. Petty quarrels, dissensions and jealousies which will creep into Medical Societies can often be prevented from gaining headway and probably seriously injuring the Society if the Secretary possesses wisdom and diplomacy necessary to handle the emergency.

The Manners of a Gentleman: This need only be mentioned. This essential, necessary but often lacking in our every-day life is certainly needed in the Secretary of any organization particularly the Secretary of a County Medical Society.

In a County in which I formerly lived, back through the woods and over the hills, away from street car lines and the hard roads was a plain Country Doctor. He came into our Society and in a short time was elected Secretary. Immediately the Society took on new life, meetings were better attended and more interesting, membership in the Society rapidly increased until practically every physician in the County was a member.

What caused the change? He as a physician was little known outside his own town. Other members could deliver better speeches and possibly prepare and read better papers, but he had found the field in which he loved to labor. If he wrote you a letter requiring an answer and you failed to respond, he promptly sent you another, so worded as to make you feel that you had neglected a duty and ashamed that you required the second letter. If you wrote him his answer was prompt and to the point.

Although he lived in the extreme Northwestern part of the County, even the extreme Southeastern part was not too far for him to attend the meetings of the County Society; no weather too bad nor roads too muddy—he was there, ready for work.

Embodied in that Secretary was Industry, Endurance, Diplomacy, Wisdom and Manner. I

am glad today that I was one that helped "find" him as a Secretary. Modesty forbids me mentioning his name but to my mind he has shown himself to be the Secretary of Secretaries—and I find you have recognized him as a Secretary of ability and have made him in fact the Secretary of the Secretaries.

"The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night."

CYSTITIS. ITS CAUSE AND WHAT TO DO WITH IT*

J. A. JERGER, M. D.

CHICAGO

In this day of specialities, the literature abounds with profound accessible knowledge, theories and classifications on all subjects, and the one I am interested in has not been slighted. Therefore, because of the large number of exhaustive treatises on cystitis, it is my purpose to avoid theory and classification, and to attempt to submit a logical, practical understanding of the subject matter in hand. If I fail, a certain percentage of the blame must necessarily fall upon the disease, as cystitis unfortunately is a term that carries with it no definite pathological picture. It is a condition *per se* so rare that one might forget the word, because the nomenclature always has to be completed by a qualifying adjective.

The wretched facts that face us when the sufferer appeals for relief from the distressing symptoms, pains and frequency of urination, suggest of course an inflammatory process of the bladder. In many instances when the physician is confronted by a case whose symptoms are pyuria and dysuria, he may struggle for months to heal an uninfamed bladder, over-looking all the while a remote cause that in the first instance would have been of minor importance, but which later is of sufficient seriousness to produce death. It is obvious that minute attention must be paid to probable causes if the best interests of the patient are sought.

GATEWAY OF THE BLADDER

Often a glance at the entrance of the urethra will clear up the etiology of the very perplexing

*Read before Englewood branch, Chicago Medical Society.

chain of bladder symptoms, for instance the little contemptible caruncle that is just a slight, circumscribed, congested patch of elevated mucosa is easily overlooked. In order to emphasize the importance of recognizing this insignificant lesion, allow me to recite an experience that I have had recently:

A nun referred to me gave the following history: Six years ago she was sent to the late Dr. J. B. Murphy, suffering with a most profound cystitis. She was cystoscoped, x-rayed and subjected to every test known to science by that master mind. After several months she returned to the convent slightly improved by alkaline treatment and rest. The symptoms returned and persisted in spite of many trials at relief by well-known men. After several weeks of exhaustive survey of the lower and upper urinary tract, I could not locate any pathology to account for the patient's distressing condition. On general principles I cauterized with trichloroacetic acid a small caruncle just inside of the meatus urinarius, and much to my surprise the symptoms of a virulent cystitis disappeared in a few days and she has remained well ever since.

Again the protusion of a small portion of the urethral mucosa that in appearance might be compared to a prolapse of the rectum, is apt to cause no end of uncomfortable symptoms. The active, or chemical cautery, will quickly disperse the difficulty.

Urethra. This innocent canal in the female, and tortuous, treacherous one in the male, is the cause of many a stubborn incontinence.

A simple urethritis of microbic origin of the pseudo gonorrheal type will, especially in the female, set up a most unpleasant reflex irritability of the bladder. This condition in many instances is aggravated by strenuous specific treatment in the erroneous belief that the complaint is a Neisserian infection. The microscope and the Gram differentiation are necessary for an immediate decision. It is understood that non-gonorrheal urethritis can simulate the true specific inflammations. It is, therefore, imperative that negative evidence be secured in order that the patient may be afforded the needed relief. Modification of the urine applies to all cases of urinary difficulties. The best remedy in my hands to reduce aciduria has been dram doses of soda bicarbonate twice daily. This treatment

affords less gastric disturbances and is just as efficacious as the many shot-gun prescriptions so commonly used.

A simple urethritis must be handled in a simple manner. An injection of a one per cent. solution of cocaine to which is added five drops of a 1 to 1,000 solution of adrenaline chloride, is a very efficient and soothing remedy. This should be carried out by the physician and injected once daily, being held in the urethra for a few minutes. The patient should be given mild irrigations, such as a solution of bichloride of mercury, 1 to 20,000 in strength, to be used two of three times daily, by urethral syringe or douche.

BLADDER

Many dysurias are due to the sagging and malposition of the bladder. The patient is unable to empty the bladder completely and the resultant residual urine decomposes with subsequent inflammatory changes and accompanying signs. A bladder has no right to sag unless encroached upon by fibroids, pus tubes, or interfered with by marked retroversions, post-operative pathology following hysterectomies, plastic work on the round ligaments, prolapsus uteri, or cystocele. All these remote occurrences will tend to throw one off the right track and cause one to treat an obstinate cystitis in vain. To satisfy one's mind that the cause is not intravesical, tampon the vagina tightly, thereby lifting the sagging bladder, and in a few days the symptoms will disappear or be much improved. A return to the dysuria will happen when the tampon is removed. It is manifest that any but surgical correction of the pathology or deformity is useless.

An insert here, apropos of surgical procedure referable to pan-hysterectomies, is warranted. I have run across several cases of almost intractable dysurias following panhysterectomies due to the supports of the pelvic floor being removed as well as damage being done to the vesical wall by stripping it away from its uterine attachments. From the urologist's standpoint it would be better if a little more than the cervix were left, providing malignancy did not call for complete removal, and if a little more care were exercised in tearing the bladder away from its resting place; then when the bladder is full it would not fall into a flabby floor and refuse to empty itself completely.

The urine as an aid to diagnosis in frequency and painful urination.

I have failed to discover in the literature or in my own experience any definite diagnostic value as to the location of pathology, and in but a few instances the causative factor of diseases of the urinary tract when urine is given to us by the patient. Conservative estimates place the urinary difficulties arising from the upper urinary passage at about seventy per cent. This means that in this percentage of cases painful and frequency of urination have their origin in the kidneys or ureters.

You can readily see that if cystitis as we understand it were treated purely as a bladder lesion we would fail to produce results in seventy per cent. of our clients.

As far as we have gone we know that pus in the urine has no further significance than attracting our efforts to the urogenital tract and the fact that we have to deal with an infection.

Very many urines which contain pus with attending symptoms of cystitis, come from bladders that are normal in every particular. And again the urine may be filled with bacteria and some of the minor symptoms of cystitis present, but the bladder be perfectly free from inflammation. It is stated, and justly so, that the bladder wall will not be affected by an attack of pyogenic organisms unless it has been injured previously by any one of the conditions mentioned in this discussion.

It is therefore obvious that the pus may come from a diseased kidney and produce symptoms of cystitis when the bladder is entirely sound. So do not be so sure you have a case of cystitis to deal with when you find pus in the urine.

The two glass test is necessary to distinguish that the pus comes from the bladder. An ounce or two is passed into glass number one, the remainder into glass number two. The first glass shows the contents of bladder combined with the washings from the urethra. The second glass shows contents of bladder. Now the question arises whether the pus in the second glass comes from the bladder proper or is conveyed from the upper urinary tract.

By washing the bladder free of all debris with a boric solution, allowing the catheter to remain in position for thirty minutes, you will obtain the urine from the kidneys undiluted, giving you

the desired information as to pus from the kidneys. In the absence of cystoscopic and ureteral examination, which has no charm for the general physician, I suggest that the above test be used in every case of cystitis, and, if for some reason this cannot be done, the laboratory technician can always distinguish pyelonephritis from cystitis by the presence or the absence of blood or epithelia on the one hand, and albumin, casts, deficient excretion of solids, and renal and pelvis epithelia on the other.

Relying for an indication of the pathology upon the disposition of renal pus to settle in compact form, and bladder pus to remain partially suspended in a fluffy manner, is very unsatisfactory, in as much as a very mild pyelitis may be overlooked by the presence of a more acute cystitis when the two inflammations exist together.

Bacterial examination offers no solution to the problem of location of the lesion, as nearly all of the pyogenic organisms may be discovered in any part of the urogenital tract; however, the identification of any pathogenic strain offers valuable prognostic and therapeutic information.

The bacillus coli obtains much prominence as a constant offender of the urinary tract. It is as a rule but slightly virulent. Without a predisposing factor—a fertile soil upon which to grow—it causes no infection whatever. When it takes root upon a slight lesion of the bladder, assisted by retention, it produces inflammations of the most intense severity. Its chief role is acted in the pelvis of the kidney, treacherously producing bladder distress with no appreciable vesical pathology.

Because of the many modes of entrance into the genito-urinary tract the treatment of the cause of the bacillus coli infections is a difficult task. As we have no control over the indirect mode of invasion, such as through the blood and lymphatics, we are primarily interested in the direct method of entrance, such as unclean rectal and vaginal examinations, filthy bed pans, infrequent changing of menstrual pads, faulty obstetrical management, dirty catheterization, etc. It is self-evident that the majority of these direct methods are preventable, being due to carelessness of physicians, nurses or ignorance of the patient.

Let us at least be clean in the handling of

our patients, and not have the etiology of this persistent infection laid at the door of those who should alleviate and not produce pain.

Hexamethylenetetramin, the ammonium salt of formaldehyde, or urotropin, its trade name, and quinine are the most valuable drugs we possess for combating the bacillus coli infections. Urotropin should be given in high doses until the urine is free from bacteria. Begin with ten grains and gradually increase up to twenty grains every four hours, and when the desired effect is obtained, viz., absence of symptoms, decrease until five grains are given and keep this up for several months as you are dealing with a chronic ailment and it needs chronic treatment. The quinine, two or three grains every three hours, acts as a specific during the pyretic stage and should be given until the temperature subsides. Now and again one is apt to come in contact with a subject that does not bear the effect of urotropin with good grace. If marked irritability of the bladder is noticed after a few doses, it would be better to discontinue the drug and substitute sandalwood oil in twenty minum doses and salol with soda bicarbonate in ten grain doses.

The advance treatment of lavage of the kidney pelvis with the silver preparations is mighty effective in acute cases. This is accomplished by passing a ureteral catheter through the cystoscope to the pelvis of the kidney, and injecting a ten per cent. argyrol solution into the seat of the trouble.

I doubt the efficacy of this form of treatment in chronic cases as I have yet to see any decisive result obtained.

It is always advisable to govern the habits of bladder invalids. Mild non-irritating foods should be eaten and the bowels should receive a visit from our old pal, blue mass, now and then. Hot baths should be taken, rest, and water in abundance, and if sleep is interfered with, a suppository containing one grain of opium and one-fourth of belladonna should be prescribed.

Surgical treatment of coli infections of the kidney affecting the bladder may be compulsory in a few instances, but so far I have not met the necessity of such radical procedure.

Pus containing the gonococcus. The bladder becomes involved with the gonococci by direct extension, and I am loathe to admit, that in

many cases by our own too vigorous treatment. In the female heroic douches and urethral injections at the height of the acute stage should not be used, while instrumentation and drastic irrigations in the male should be avoided, for additional gonorrheal pathology in the prostate, vesicles and epididymis is all too easily produced. It is far better to avoid all strenuous measures the first week of an acute urethritis or vaginitis, thereby in many instances saving the patient added horrors to their already painful dilemma. The only acute cystitis there is, is brought about by gonorrhea, excepting those of traumatic and chemical origin, and last from a few days to many weeks. The symptoms are not general as in other infections; that is to say, there is malaise and discomfort, but seldom a rise in temperature. The severity of the local symptoms, tenesmus and frequency, vary from a slight annoyance to excessive irritability, acute pain and actual incontinence. In the latter case a few drops of bloody or milky urine may be voided every few minutes.

To determine the presence or absence of the gonococcus in women (and most of the urinary difficulties occur in women as we can all testify) express the contents of the urethra by means of the finger in the vagina. A slide can then be made of the secretion and the microscope will clear up the situation.

If gonococci are present, iodine douches are called for, one dram of the tincture to a pint of warm water twice daily. Internally ten grains of salol and santal oil every four hours are of value, with liquid diet and an abundance of water. Do not discontinue the iodine douches during menses as I have many times seen a flaring up of an almost cured vaginitis by the warmth and rich food that the uterine secretions offer at this time; and I have never experienced any but beneficial effects produced by deviating from the obsolete rule of no douche or both when menstruating. If the symptoms do not abate at once by these general measures, then local measures must be instituted, and the added danger of instrumentation risked. Permanganate of potash irrigation or nitrate of silver instillations are the most reliable drugs for this purpose.

It is doubtful whether the gonococcus ever invades the structures above the bladder so there

should be no mistake in recognizing the pyogenesis as one extending from a primary urethritis to the bladder, a condition, as I have already stated, which is never chronic unless complicated with other organisms.

Tuberculous Pus. It is very hard to distinguish tuberculous pus by bacterial examination as usually there is a mixed infection present and the tubercle bacilli are rarely found. Primary tuberculous infection of the bladder is so rare that we will not consider it here. All of our tuberculous bladders have their source of infection in the kidneys or genital organs. The onset of many fatal tuberculous processes in the kidneys extending their initial symptoms to the bladder is often overlooked by insufficient investigation. The first symptom of tuberculosis of the kidney is frequent urination. This is the case whether there is any metastasis in the bladder or not. The next symptoms are blood, pain and pus. No form of vesical inflammation produces as much irritability as tuberculosis. The patient later presents the usual characteristics, a history of tuberculosis in other members of the family and evidence of the disease elsewhere in the body either in the lungs, the epididymis, or cervical lymphatics. He is usually under forty, and is pale, thin and lymphatic in appearance, with loss of weight, evening temperature and rapid pulse.

Tuberculous cystitis offers no hope of cure unless the offending source can be surgically removed after which the bladder progressively improves with instillations of a five per cent. carbolic solution.

Typhoid Bacillus. The presence of the typhoid bacillus is a frequent reason for painful urination; this, of course, is most in evidence during the active stage of typhoid, but is very often present in the so-called typhoid carriers whose symptoms are similar to those produced by other infections only of a milder degree. Bacterial culture will quickly discover this type of infection. Here again urotropin does good work with the addition of salol and plenty of sodium bicarbonate. In a very short time the urine will be entirely free from its disagreeable host.

I have mentioned perhaps all of the pyogenic organisms bringing about a definite acid cystitis that one will meet in general practice.

There are a few other types responsible for a distinct alkaline cystitis and these are the staphylococcus, streptococcus and micrococcus urea, which are always of serious import. This form of cystitis practically means a pus pocket in the bladder caused by mechanical retention and irritation, as in calculi, diverticuli, large prostates, tumors, marked strictures of the urethra, or sagging of the bladder wall as before mentioned.

I have always doubted the possibility of permanently cleaning up an ammoniacal urine, as this is a condition of long standing and definite damage to the vesical mucosa has taken place. Even after the offending body has been removed I have found it a discouraging matter to free the urine from these ammoniacal manufacturing organisms, which subsequently cause fatal damage to the kidneys. A few writers state that ammoniacal urine may sometimes be overcome by vigorous local treatment. I strongly advise the attempt as the patient is far safer with chronic acid cystitis than with alkaline inflammation. If it is feasible to remove the cause, do so, and then give generous doses of acid sodium phosphate and instillate the bladder with a two to five per cent. silver nitrate solution at least twice a week.

One of the most prevalent forms of irritable bladder that we are asked to deal with is the so-called traumatic cystitis, a most misleading title.

Definite metabolic changes, at present unknown, produce characteristics of the urine that make the bladder very irritable and the patient more so. These conditions outside of slight injected areas produce no pathology in the bladder as evidenced by the cystoscope unless of long standing when further infection takes place and pus and blood will be found in the urine.

Frequent and painful burning urination are about the only symptoms that these gouty-dyspeptic or rheumatic patients complain of. They come with highly concentrated urine loaded with urates, oxalates or phosphates and no other appreciable etiologic factor showing.

It is a great pleasure to clean up this class as they amend very readily to treatment, internally calcium, magnesium oxide, magnesium salicylate—ten grains of each three times daily; water freely; non-nitrogenous diet and bladder irrigations of a one per cent. sodium bicarbonate solution every third day is necessary for complete

relief. A return of the inconvenience is usual if strict dietary measures are not enforced.

Chemical Cystitis. This is brought about by the ingestion of drugs either in the treatment of disease, or by mistake, and sometimes with suicidal intent. Carboic acid and other coal tar derivatives, also turpentine, are the commonest causes of this form. Stopping the drug, using sedatives and the instillation of a 20 per cent. argyrol daily, are sufficient to allay the distress.

Blood in the Urine. Ruling out tuberculosis and calculi, blood in the urine is very suggestive of bladder tumors. The benign papilomata may be present for many months without causing very much discomfort other than more frequent voiding with the presence of a tinge of blood; but after further infection takes place by the disintegration of the growing tumor, the usual signs of a virulent cystitis are manifest.

The papilomata are by far the most popular bladder tumors of today, and if not destroyed early a fatal malignant degeneration takes place.

Almost every known tumor is liable to attack the bladder, but fortunately are of rare occurrence. Fulguration, or the electric spark, is the only method of real value used for the removal of early growths. When malignancy has occurred additional radium therapy has produced many reliefs, and in some instances definite cures. Bladder surgery for the removal of growths is attended with such appalling post-operative conditions as well as a tremendous mortality that one hesitates to advise along these lines. Where retention is almost absolute it is sometimes necessary to do a cystotomy for the sake of the patient's comfort.

Many other causes of cystitis such as ulcer, atrophy, atony, foreign bodies, fistulas, etc., have no particular place in this paper because they have no characteristics of diagnostic value in the ordinary manner. . .

In concluding let me urge a more general use of the cystoscope, which at present is of value only in the hands of a few. It has no peer among diagnostic appliances in determining all bladder lesions, and I believe the time is not far distant when the general physician will appreciate this fact, and will manipulate the cystoscope as well as he does the stethoscope or a blood pressure apparatus. When that time arrives cystitis cases will not be allowed to drag on, and the number

of permanent bladder invalids, due to the unscientific measures at present in vogue, will be reduced to an astonishing degree.

30 North Michigan Avenue.

THE COUNTY SECRETARY AS VIEWED BY THE COUNTY SECRETARY*

C. S. AMBROSE, M. D.

WAUKEGAN, ILL.

Mr. Chairman and fellow members: The subject assigned naturally places me in an embarrassing position before this body; first because I am only a novice at this work having served in this capacity seven years—nextly it is unbecoming to throw bouquets at one's self and lastly if it were not bouquets why take a chance on bricks while an occupant of a glass house.

Therefore I want it definitely understood the object of my portrayal does not in any sense represent the Secretary of the Lake County Medical Society.

The Secretary of a County Medical Society, speaking in the broader sense, should be an individual endowed with many qualities not found in the average run of the profession—broad minded, full of "pep" and enthusiasm and let's put a little emphasis on the word enthusiasm for it is one of the greatest assets in the whole business or professional world. Diplomatic, a good mixer, idealistic, an individual with plenty of initiative, to stand ready at all times to suggest a way out or a way in as the case may be. Should by all means have the quality of good judgment. Perhaps not the kind of good judgment exhibited not so long since right here in the Capitol, but good judgment any way. Now if we find some individual in your County Organization possessing a blend of these qualities—and some of the Counties in the State have found them for I have met them—right here you have your efficient Secretary you hear so much about and this individual should be inducted into the service.

Now to my mind this individual must get in close touch with the membership, be able to anticipate their needs, their likes and dislikes. In these days it is absolutely impossible to run off a years program of stereotyped meetings, same

*Read at Secretaries' Conference, at Springfield, May 17, 1921.

thing or plan, over and over again and expect to have your attendance record hold up—it can't be done. I have found after several years experience that doctors on the whole are almost human and to hold their interest in Society work we must have things just a little different from month to month and I am of the opinion Lake County is typical in that respect.

With your permission and by way of explanation will tell you something of the plan. For some time we had a regular program of papers by various members and usually some talent from out side the County and nearly always it fell to me to make excuses to the speaker for the small attendance. Try as we would it seemed a hopeless task to get the membership out. We then tried out the plan of having something just a little different each meeting, one meeting given over to a good live symposium—perhaps the next a strictly business meeting, one of these a year and without a doubt one of the largest attended, then have one abstracting the late Journals, interesting of course, and it is surprising how few doctors ever read their journals—then we have our annual picnic for members and their families, an all day affair with lunch, games and athletics and is one of our big features—and this year we have added what is to be our annual banquet and good fellowship meeting for members and their wives and right here I want to tell you this is a winner.

Now what do we get out of this? Closer fellowship; at least 50 per cent. better attendance at meetings; better medical men. Have done away with the greater portion of the little petty jealousies that exists in most of our medical organizations; have developed a very good fee system with the tendency to place our profession on a much higher plane in the community. So generally speaking I am of the opinion a varied program is the most successful—and don't lose sight of at least three of the big attendance getters—Annual business meeting—Annual outing and picnic—Annual banquet and good fellowship meeting.

This same Secretary should always be ready to listen to any reasonable criticism or suggestion from the membership. He should plan for the betterment of his Society in all things pertaining to the social, professional and business life—

should be a good program builder for these are the things that spell success and hold membership interest in meetings.

In my opinion, to be a good executive or Secretary of County Medical Society, one must have a pretty good knowledge of human nature and be able to analyze and put into account the personalities of those with whom he may be associated for it is right here Medical Societies are made or disrupted as the case may be.

It is discouraging to be sure at times to find this efficient Secretary, and I am sure this is the sort you are most interested in, is not only the Secretary of the local society but a committee of one on program, a committee of one on legislation, same on publicity, also on attendance and no doubt same on grievance and anything else that comes in the category of committee work but if the qualities predominate that I mentioned in the beginning of my talk these little discouragements only serve as a stimulant to better work.

And now who receives the benefits of all this? It seems to me it is a fifty-fifty proposition—an organization with a Secretary of this type is bound to prosper and as for the individual in question the motto of Rotary certainly applies—"He profits most who serves the best."

NEW VIEWPOINTS IN THE FEEDING AND NUTRITION OF INFANTS AND CHILDREN*

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The lower animals guided by instinct choose those foods best suited to the needs of growth, resistance to disease and capacity for propagating their kind and nourishing them. Harsh penalties are meted out by natural laws, either directly or indirectly to those which do not reach a certain standard. Some of them, particularly the birds, will destroy those of their off-spring which do not seem to show capacity for shifting for themselves at a certain time. The same thing has been observed in savage tribes, who put away what seem to be the weaklings.

It might be assumed that civilized man, a reasoning being, would be guided by his intelli-

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gence in his choice of foods. This, however, is not so; for many factors, such as individual and racial habit, personal likes and dislikes, accessibility of food stuffs, climate and economic considerations, as for example, the commercial preparation and distribution of food stuffs (these being largely matters of chance) have a larger influence in determining the dietary of the human animal than has an intelligent understanding of physiologic needs. The knowledge that food plays so dominant a part in the welfare of mankind has been purchased only after generations and centuries of suffering and misery. I need mention only the countless deaths from scurvy and beri-beri—I cannot even begin to portray the infinite amount of ill health, inefficiency and loss out of life which have resulted from food deficiencies to make this point clear. There are several reasons why progress in nutrition has been slow in spite of the rapid progress in scientific investigation of the last decades. Students in this subject have neglected until only very recently the certain investigations of pioneer workers. Again, the bad results produced by deficient diets have been so slow in making themselves manifest and have often been so slightly apparent, that there has been a failure to appreciate the relationship between cause and effect. There are now, however, sufficient data both experimental and practical to justify the statement that the dietary of the human animal must include not only a sufficient amount of food but must furnish as well certain indispensable elements, the importance of which has hitherto not been appreciated.

Certain imperfections of diet have been appreciated for many decades. Graham in 1879 realized that bread made from bolted flour was less nutritious than that made from the whole grain. Dogs fed on white bread died in forty days while those fed on whole wheat, the so-called Graham bread alone, thrived and flourished. His work led to the organization of a "Bread Reform League" in London. This was founded for the purpose of supplying the poor with the kind of bread at least as digestible as and much more nutritious than the white bread in common use. In France as far back as 1876 it was recommended that babies after weaning should be given vegetables. A careful study of the

literature of the distant past would undoubtedly reveal many similar instances of now forgotten bits of wisdom.

From earliest times there have been women who could not nurse their babies. The cause for this was not then known and even now we do not know whether this is due to dietary errors or to some more inherent fault. Substitutes for the mother's milk were found in wet nurses; accounts of this are preserved for us from the days of ancient Egypt. The use of animals as substitutes is typified in the mythological reference to the nursing of Romulus and Remus at the breasts of wolves. Other animals have also been used and indeed it is not so many years ago that in France babies were nursed at the udders of goats. In our own country and on the continent, the milk of the cow has become the chief modern substitute. There were encountered with cow's milk many difficulties in digestion; and the overcoming of these has so monopolized our attention that we have tended to neglect the nutritive side of the question. We have been content in our every day practice to prescribe almost any food mixture just so long as it agreed with the baby and a gain in weight has been our criterion of success. The more critical have tried to see to it that the ration was balanced as far as fat, protein and carbohydrate were concerned. We should no longer use the term "balanced ration" but should rather say "complete ration."

In spite of the fact that we are more or less familiar with the part played by fat, protein and carbohydrate, it may be well to bring out certain significant points sometimes overlooked. In the babies' food, the sugar plays a very important role in securing an acid reaction of the lower intestinal tract through fermentation. As a result of this normal fermentation we have a medium which probably favors absorption of mineral salts, limits putrefaction and acts as a normal stimulant of intestinal peristalsis. The satisfactory stool of the breast fed infant owes its consistency in a large part to the high milk sugar content of the food. The absence of carbohydrate from the diet, as for example, in milk mixtures in which too little sugar has been used leads to constipation, an alkaline reaction of the intestine and to the lessened absorption of im-

portant substances such as calcium and magnesium. While this may be slight, yet the results will be bad even though they may not be manifest for a year or more. High carbohydrate feeding, on the other hand, without the addition of milk, as when certain well known proprietary foods alone are used, may lead to such grave nutritional deficiencies as we are now seeing in Europe.

The so-called starch injury due to the almost exclusive feeding of gruels or flour mixtures may very well be in part a war edema, in part beri-beri and in part xerophthalmia. Happily, the condition is now a rare one.

Cow's milk fat has long been known to be difficult of digestion by the human infant. This has been attributed by some to the size of fat globule, by some to the presence of volatile fatty acids and by others to the chemical composition of the fats. Homogenized milk and the substitution of vegetable fat mixtures have been tried but no conclusive evidence has been brought forth to indicate the superiority of such mixtures.

One aspect of the fat question has been of a special clinical interest to me and that is the use of Jersey milk. It is well known amongst dairy men that Jersey calves frequently are unable to digest their own mother's milk owing to its high fat content. What, then, could be more ill considered than for us to try to use such food for the human infant peculiarly sensitive to cow's milk fat. The fact that high fat interferes with the absorption of calcium has been pointed out. A more careful consideration of the influence of cow's milk fat on the welfare of babies is certainly indicated.

To secure the absorption of those elements which a baby needs for the growth relatively more cow's milk must be given than breast milk. Furthermore, it seems that if a child is below his normal weight, the food requirements should be computed upon the weight the child would have normally achieved. In our clinic we use from 100 to 120 calories per kilogram of body weight, the amount being always enough to insure growth. It is not infrequently the case that the symptoms of overfeeding and those of underfeeding are similar. A child with too little food may vomit and have bad stools just the same as

one given too much. The French have coined the term "underfeeding dyspepsia" for this condition. We have frequently in our clinic corrected a so-called intolerance of milk by giving a larger amount than the baby has ever had before. Underfeeding in quantity and quality seems to be a special vice practiced upon innocent infants.

While most pediatricians agree that milk should be heat treated before it is given there are some who still advocate raw milk. In my mind there is little doubt that milk must be made safe by heating. One cannot trust the best milk. I have coined the term "certified milk diarrhea" because of the fact that we have often encountered this condition in infants fed what was believed to be irreproachable milk. Boiled cow's milk has been shown to be better tolerated than raw milk. Recent investigation in our laboratories has shown that milk pasteurized by the ordinary hold process changes the calcium complexes to less soluble forms with the result that availability is distinctly diminished. Milk quickly brought to the boiling point over an open fire and boiled for one minute is only slightly affected. Metabolism experiments, soon to be published, have shown that the calcium utilization by infants on boiled milk is distinctly greater than that on pasteurized. From this standpoint "flash" pasteurized milk is to be preferred. Unfortunately this method of heat treatment does not always insure the destruction of pathological organisms.

There are certain essential constituents of food other than the fat protein and carbohydrate which must be considered in constructing a diet for the young child. These are of peculiar interest because of the fact that they have only recently been discovered. The pathologists have long appreciated that a diet containing only the known food constituents was inadequate, while the clinicians and the student of nutrition have only recently appreciated that other factors were necessary.

The one possible exception perhaps is the vitamin which prevents scurvy. The pediatrician at least has been fairly consistent in ordering orange juice as a daily adjunct to the diet of the artificially fed infant. He realized that scurvy could be thus prevented even though

he was aware of the existence of a specific antiscorbutic substance. The antiscorbutic content of milk is low and is further diminished by heat treatment. Thus we have the reason for the routine use of the orange juice. Recent work has shown that this antiscorbutic substance is present in large quantity in the tomato and in fruits in general. Perhaps it is because we have always given orange juice as a part of our routine that we have not encountered the interesting manifestations of subacute scurvy which have recently been described by Hess of New York. Dr. Hess attributes failure to gain, irritability and slight dilatation of the heart to a lack of this antiscorbutic vitamine in the diet. This work has been generally accepted but is open to question. It is within the bounds of possibility that certain of the changes he describes are due to the absence of another vitamine, namely, the one which stimulates growth. As a matter of fact it was this suspicion which led us to investigate orange juice more closely and to predict that it probably contained a considerable amount of the antineuritic or growth stimulating vitamine (sometimes called water soluble B). Our investigations on infants, pigeons, rats and guinea pigs showed the presence of this essential substance.

The antineuritic or growth stimulating vitamine, the absence of which causes beri-beri, a multiple neuritis similar to that caused by lead, diphtheria toxin and alcohol, is, in contrast with the anti-scurvy vitamine, very resistant to heat. With us, manifest beri-beri in infants is almost unknown. It does occur however in the orient and in the Philippines in babies who have been fed at the breast of mothers who themselves showed signs of the disease or who partake of a diet which contains too little of this substance. This vitamine is present in certain of the yeasts, in grains and seeds which have not been decorticated, in leafy vegetables, and in certain fruits, notably in the orange. Polyneuritis was produced in pigeons by feeding them polished rice until in one particular instance, the bird was believed to be actually dying, being barely able to breath. The injection of 5 c. c. of orange juice restored this pigeon to normal within a few hours, a result seemingly quite miraculous to the uninformed.

In our investigations on babies we have been able to show that in a diet which is apparently generous, growth is not always possible or rapid. If, however, one gives an ounce and a half of orange juice a day, growth is speedily resumed. When orange juice was given from which the growth stimulating principle had been removed, growth promptly ceased even though plenty of the anti-scurvy substance was left. It is not always easy to give conclusive proof by special reactions on the part of the child that this growth stimulating vitamine is needed. It is our impression, however, that the addition of this substance to the diet of sick infants and children is often of distinct service and there is no serious case in which we do not call for its inclusion with the food. It tends to stimulate the appetite and may tide a child over a critical period. Our supply is prepared from the wheat embryo through the courtesy of the Department of Nutrition of the Child Welfare Research Station. In a number of cases we have used yeast as a source of the antineuritic vitamine and, as anticipated, found it distinctly unsuitable for infants because of the purgation which it produced. We have been prejudiced against its use in older children as well, partly because it stimulates peristalsis and partly because of its uric acid forming properties. For practical purposes the juice of the orange seems the most satisfactory source of the antineuritic vitamine for infants and young children. The addition of a few grains of the bicarbonate of soda will neutralize the acidity which occasionally causes distress in infants. For those who are older a vegetable soup is of advantage. Unless this soup is quite concentrated, however, a considerable quantity must be given. It should be recalled at this point that vegetables are rather loosely prescribed for older babies and younger children without due regard to the method of preparation. This consists only too often in the boiling out of most of the nutritious principles and the giving of the cellulose residue. From your own experience you must be familiar with this unpalatable and un-nutritious dish. To avoid any possibility of faulty methods, we prepare our vegetables in the form of a soup and give it to babies as young as six months, using it as a diluting fluid in the milk modification.

Much has been written about the fat soluble

vitamine. This substance, found in largest quantity in the livers of fish, in butter and in egg yolk and to a less degree in leafy vegetables, has been believed by some to be a preventative and cure for rickets. The general use of cod liver oil (with or without phosphorus) suggests that it may have some therapeutic value. Conclusive proof, however, has not been brought forward that it is the fat soluble complex which has this beneficial influence. At present the subject is in a rather unsettled state.

The chief definite relationship between an absence of the fat soluble vitamine and pathological conditions has been shown in certain peculiar eye disease, notably xerophthalmia. Therefore, a careful examination of the diet of children suffering with obscure diseases of the eye is, from a fat soluble A deficiency, indicated. From studies of the nutritive value of fat soluble vitamine we may conclude that there should not be a lack of foods—butter, eggs, greens, etc., furnishing this vitamine over any considerable period. And yet in our anxiety to supply this food accessory we must not be led into the opposite error of giving too much of these fatty food stuffs often not well tolerated by children.

One has only to go back to the medical literature of the late 70's of the last century to appreciate the amount of attention paid to the inorganic salts in nutrition. As time went on, interest died down. It is only within the last few years that we have again given thought to their importance. Of these mineral elements, there is scarcely one as interesting as calcium. For years a controversy has been waged as to the relationship between calcium and rickets, the point disputed being as to whether this affection was due to a lack of calcium alone or together with some other substance or condition. Scientists have tended to split hairs over the histologic study of bones which seems to me has been rather unfortunate. We have always taken the stand that no matter what part a deficiency of calcium plays in the etiology of rickets, we must see to it that the food contains a sufficient quantity of calcium, and that the calcium is absorbed. It has been shown here that the pasteurization of cow's milk makes calcium less available. The application of heat over a long

period of time as in condensed and evaporated milk has the same influence. Cow's milk fat has been pointed out to interfere distinctly with the absorption of calcium. The artificially fed infant is here in a difficult situation, especially if he is one of those in whom cow's milk fat causes a lessened or even negative calcium utilization. If the cow's milk fat is removed from the diet for the purpose of improving utilization, he is deprived of the fat vitamine so necessary to his well being. To insure sufficient calcium absorption it is necessary to give a much larger quantity of cow's milk than the child actually requires for his growth, in itself, an undesirable condition, especially in those infants and children whose digestive organs are not highly efficient. For the time being, however, and until we can improve our present artificial feeding mixtures over and above what they are, the giving of a large quantity of milk, in some cases as much as 12 per cent of the body weight instead of the usual 10 per cent, is advisable. This whole chapter is just in the making and more positive statements will be forthcoming within the next few years. There is one lesson, however, that we must keep always in mind and that is that the human animal can no more be fed a diet low or lacking in calcium than can the young or any other species. Turn only to the experience of poultry and stock raisers and you will find that no intelligent man will attempt to feed his animals without a liberal allowance of this necessary mineral. Just as milk is the chief source of calcium phosphate in infants, so it is for children of later years. In a large number of children a mere examination of the teeth will suggest the amount of milk that has been taken. It will be found that those with poor teeth have not had their daily quota of milk. We occasionally meet an exception and on inquiry find that Jersey milk has been used but our experience has been too limited for me to make a too general statement. There are other exceptions to these statements; in fact, the whole question is not as simple as we would wish it to be. Nevertheless, our present knowledge indicates that the use of milk must be made universal in children. By this I do not mean that children should gorge themselves with two quarts of milk a day or milk

fortified with cream, but I do mean that the families which do not take any milk must be made to take their pint and a half, or quart per person per day. Certain vegetables supply a small amount of calcium even if the methods of preparation are correct but cannot cover the daily requirements of children. The growing child requires a much greater proportionate quantity of calcium per day than an adult in middle life. Dietary studies show that an ingestion of approximately 7/10 of a gram of calcium oxide per day is the smallest amount which will maintain the average normal adult in calcium equilibrium. Since absorption is far from being complete, a larger quantity is desirable, perhaps twice as much.

Scarcely any disease of childhood has given rise to more study, clinical and laboratory, and more controversy than has rickets. In the first place we are not agreed as to what exactly constitutes this malady. If we diagnose rickets every slight beading of the ribs or concavity of the chest or prominence at the lower margin, or if we include every deviation from an ideally perfect tooth—one which is well formed and pearly glistening white with normal alignment—it would be necessary then to agree with those observers here and abroad who state that from 90 to 95 per cent of all the children they see bear the stigmata of the disease. If, on the other hand, we include only very definite bony deformities, then the disease is only fairly common. I, myself, am inclined to agree with the more critical observers. However, it seems to me that we should include in rickets not only the mere curvatures of the chest and extremities and the softening of the bones of the head, but should also consider deformities of the nasal apertures, of the jaw and disturbances of the position of the digestive viscera as well. Round shoulders and scoliosis are afflictions of slight significance as compared with that skeletal abnormality associated with a faulty supporting of the intestines. It certainly seems justified to assume that rickets and faulty posture play a not inconsiderable part in the development of visceroptosis. A general retardation in growth is also a part of the disease but here we must bear in mind the fact that an insufficient amount of other essential food constituents, such as the

vitamines, may play a part. I shall only mention the controversy as to whether a lack of calcium is the cause of rickets and I think mankind will be much benefited if, for the time being, this question is dropped and instead, every effort made to secure adequate calcium phosphate absorption, without slighting, of course, the other necessary elements of the diet. The best way to secure this is to give the infant the milk of its properly nourished mother. While rickets in the breast fed certainly does exist, it is almost always slight in degree. Rickets is essentially a disease of the artificially fed infant. The most easily available source of calcium outside of breast milk is in the milk of the cow. There is no doubt, however, that cow's milk at best is an unsuitable food for infants and even in the hands of skilled workers is difficult to modify so that its nutritive efficiency shall even approximate the milk of the human mother. By the avoidance of a mixture too rich in fat, by avoiding milk which is pasteurized or heat treated over a too long period of time, by seeing to it that milk and not calcium-free substitutes are used and by properly modifying the milk so as to secure good calcium absorption, we are doing as much as we can do at present to prevent rickets. Recent work from Boston seems to show that in guinea pigs calcium deposition in the teeth is not so good when the antiscorvy vitamine is lacking. Although there is no definite proof that a lack of orange juice has anything to do with rickets, nevertheless, we should again insist upon it that rarely less than an ounce a day and better still, two or three ounces to the older baby should be given.

Not often enough can it be emphasized that the danger of rickets exists not only in the suckling period but for several years thereafter. Here again milk included in the diet is the best prophylactic. Children should drink milk every day. It should not be so rich in fat as to dull the appetite nor so much in quantity—a pint and a half to a quart is ample, if not long heat treated—as to take away the desire for other foods.

The part that iodine deficiency plays in the pathology of the human animal is just beginning to be appreciated. Living as we do in a goiter belt we take more or less for granted the large number of instances of enlarged thyroid gland in

children. The goiter, unless extreme, is looked upon with more or less complacency. It does not apparently affect the health of the child as far as can be made out by rough clinical means. If, however, it can be definitely proven that the individual with goiter has an increased susceptibility to Graves' disease, we will feel more keenly the significance of the iodine deficiency. Animals fed low in iodine breed exceedingly poor offspring. In certain portions of the country still births in pigs—hairless pig malady—has been shown to be due to a lack of iodine in the food of the mothers. It has been recently shown in a school in Cleveland that the thyroid gland diminished in size when sodium iodide was given in minute quantities by mouth. The best source of iodine is sea food. It is also present in minute quantities in other foods. Iodine when present in the soil is taken up by vegetables. Certain waters may contain more iodine than others. The question of the iodine requirements is far from settled.

The need of iron in the dietary should require little argument, even though people with a slight diminution of the hemoglobin content of the blood do not become seriously invalidated. Extreme cases of "food anemia" are not infrequently seen in infants and children taking an exclusive milk, bread and cereal diet. So severe may this trouble become that the original cause may not be suspected and if there were no questioning as to the absence of iron containing foods from the diet, proper therapy would not be instituted. As one writer has aptly stated, it is better to get our iron from the market than from the druggist. We should, it seems to me, look to the iron containing foods, such as leafy green foods—lettuce and spinach—egg yolk, iron containing fruits (prunes) and of the cereals—oatmeal—for this mineral food stuff. There are other essential and less common mineral elements which are found in vegetables. I will not enumerate them because of the fact that while they appear to be indispensable, too little is known about them as yet to make practical application to the feeding of infants and children.

It is manifestly impossible to cover the whole field of nutrition in so brief a space of time; and I have contented myself with sketching in a very sketchy way a few of what seem to be the high

points. I realize that a person who advocates the use of proper foods is in serious danger of being considered a food crank. Folks want to eat what tastes good and fear that a bit of learning as to caloric value and lime content may tend to check the psychic secretion of gastric juice. One needs only to try to have food directions carried out to realize that there are many individual peculiarities and prejudices which are not easily overcome. The food habits of the family are quite distinct and almost sacred. If one questions the mother or father, one hears in a surprisingly large number of cases the statement "Oh, I never take milk. I can't bear it." The same is often said regarding vegetables. Eggs, meat and potato and bread seem to form the bulk of the American diet. It stands to reason that if father does not like milk, a glass milk pitcher—and it should be glass so as to develop a visual milk desire complex—will not be on the table. Thus the opportunity of properly developing a milk habit in the children is lost. The same thing applies to vegetables. Some of the dislike for vegetables is understood when one considers the methods of cooking these foods practiced in the average home and eating house. Not only is there no added flavoring but the good taste and the nourishing principles are painstakingly removed. These prejudices in the parents must be overcome before any advance can be made in teaching the children proper eating habits.

Interestingly enough the fact of people living on farms is no guarantee that they will like milk or vegetables. Thanks to the war, the habit of home preserving of vegetables has become fairly widespread. This, in fact, is practically the only way that vegetables can be got in the country in the winter because of the isolation of the small hamlet from the markets of the larger cities. Education may lead inhabitants of rural communities to secure fresh vegetables occasionally during the winter and to put by those root vegetables like turnips, carrots, pumpkins and parsnips which can be kept over in a fresh state during the winter. Generous indulgence in fruit, especially the orange, will make up in part for the lack of fresh vegetables.

It should be remembered that the same biologic principles hold true in the case of the human baby as with the young of other species.

The best and greatest growth takes place in infancy and early childhood. At that time an adequate diet is imperative. If the diet is deficient or if illness interferes with the taking of food over any period of time, that which is lost cannot apparently be made up. It is true that we may fatten by giving enough foods but the bones and other tissue suffer. We have to consider that the question of appetite also plays an important part in faulty growth. The eternal cry from the parents seems to be "I cannot make my children eat." This problem is, of course, a serious one in the light of what has just been said. Too little food leads to tissue starvation just as does an improperly selected diet. The cause of this probably lies in youthful wilfulness and partly in the bad example set by the parents. In the hospital we find the greatest difficulty in getting some of our children to eat. These require infinite patience and tact on the part of the attendant. The careless mother prefers the path of least resistance allowing the child to take what it likes. That a child does not like a given food is to the parents a sufficient reason for not giving it.

There may be a physiologic cause for the lack of appetite in certain cases. When we recall that the diet of the American child consists chiefly in meat, potatoes, bread and butter, cereals and sweets, we wonder if a lack of the water soluble vitamine in this type of diet plays a part in causing a loss of appetite as a similar diet does in animals. We have found in more or less superficial observations that a child can be occasionally made to eat more when the antineuritic vitamine is added to the food. I have found that focal infection in the nose and throat is a very common cause of the lack of desire for food. Those of you who have been interested enough to watch the effect of the removal of the tonsils and adenoids on the child's appetite will know just what can be accomplished in this way. Doctor Emerson, whose nutritional clinics may be familiar to you, in one of his articles has a chart showing the effect of the removal of tonsils and adenoids on nineteen children. Before the operation the average gain was 8/10 of a pound during five weeks. Two weeks following the operation they began to gain and in the five subsequent weeks there was an increase of 5 2/10 pounds. In other words, these children gained more in one week

after the operation than they had in the previous five weeks. The same holds true in chronic nasal sinus infections in childhood as we have had ample opportunity to observe. Tonsillectomy, however, is not indicated unless all other means of stimulating appetite have failed.

In conclusion I should like to emphasize the following points. They are:

1. The child is like the young of other species. He requires to secure most perfect growth all the essential elements of food, the minerals and vitamins as well as the well known organic factors—the fat, protein and carbohydrates.
2. The greatest need for these essential food substances is in the earliest months and years of life. Damage done at this time by inadequate amounts cannot be repaired in later years.
3. Food habits and prejudices, human indifference, denaturing of grains and economic factors as well as ignorance are some of the obstacles to the carrying out of a rational dietary regime.
4. The lack of appetite in the child is a serious problem. This must be met and solved.
5. The so-called deficiency diseases of which rickets is the most common example is due in part at least to a calcium deficiency. Either the diet is low in calcium or the calcium of the food is not absorbed.
6. Foods which furnish certain indispensable constituents often low in the child's diet are:
 1. Milk—supplying calcium phosphate and the fat soluble vitamine.
 2. Fruits—especially orange and tomato, supplying the antiscorbutic and also the growth stimulating vitamine.
 3. Vegetables—excepting potatoes—supply certain little appreciated but indispensable mineral constituents. In the green leafy vegetables iron is present. The vegetables furnish also a not inconsiderable amount of antineuritic and less of the fat soluble vitamine.
 4. Eggs—supplying fat soluble vitamine, iron, calcium and phosphorus.
7. For the time being at least we must conclude that the instinct of animals is a surer guide than the intelligence of uninstructed man in securing an adequate diet.

HYPERCHLORHYDRIA

MARION M. NULL, B. S., M. D.

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Hyperchlorhydria is a condition of the gastric function in which the secreting cells of the stomach under the stimulus of food or some other cause, secrete gastric juice containing an excessive amount of free hydrochloric acid. The older writers claim that there are two kinds of hyperchlorhydria—the neurotic and the organic forms. There has, however, never been a distinct line drawn between the two varieties; which is primary or psychic, and which is secondary or a sequel of other pathologic changes. Most classifications place hyperchlorhydria or hyperacidity as the chief functional disease of the stomach. The average physician if he has a patient with free hydrochloric acid high in quantity where there is no demonstrable proof of an ulcer, generally diagnoses the case hyperchlorhydria. In fact I have seen this diagnosis written on the history sheet at many clinics. Too much free hydrochloric acid in the stomach, it seems to me, is a symptom of a condition or conditions, the same as pain or nausea and vomiting, and not a separate disease.

Hyperchlorhydria is the most frequent of all gastric disturbances. Statistics show that over fifty per centum (¹ & ²) of all the cases coming to the physician for relief from gastric symptoms have an excess of free hydrochloric acid. In this paper it is not my purpose to discuss the degree of hyperchlorhydria or the relationship of hyperchlorhydria to gastrosuccorhea. For the sake of brevity I shall consider the excessive free hydrochloric acid secretion of the stomach as a unit, regardless of the time it is secreted in reference to the meal; for hyperacidity and gastrosuccorhea seem to be different stages of the same pathological process.

We must not forget that gastric motility has much to do with the degree of acidity. Bassler (¹) says that in the analysis of many cases in which the diagnosis of hyperchlorhydria and gastrosuccorhea looked reasonable it was found that the motility of the stomach was as much and as often more responsible for the high acidity or the large gastric juice return as were states of the secretory apparatus itself. The fact is that there are opposite and still associated conditions

that influence gastric chemistry, namely the states of secretion and the states of motility. For instance a hypermotility may exist with an increased secretion and still the test meal analysis in the way of acidity be normal or even subnormal. A hypomotility may exist with a normal secretion and still a test meal analysis be that of hyperchlorhydria or even gastro succorhea, and a mechanical pyloric obstruction or spasm may exist and still the test meal analysis be that of normal. Hyperacidity is, therefore, a relative condition and must be interpreted in accordance with the other findings of the stomach.

In this connection not enough importance has been given to the intricate nerve net controlling the gastro-intestinal tract. It is evident from experiments that I have performed on dogs that gastric secretion is more or less a reflex process. Dogs were chloroformed, a gastric fistus made and, after separating the vagus and sympathetic nerves, the vagus was cut and stimuli applied to the distal end. A rich highly acid secretion flowed out into the stomach. This simply shows that it is not only the presence of food, the smell, taste or the desire of food that produces secretion, but that it is under the nerve control. The whole gastro-intestinal system has a wonderful nerve mechanism through the nerve net with its associated nerve fibres and plexuses.

To understand this subject clearly it is necessary to consider the development of the fetus, (⁴ and ⁵) for without that we could never appreciate certain vital things. The first evidence of the stomach is found at about the second week after fecundation. At this time there is no intestine. Then from it the intestinal tube gradually grows downward to meet the hind gut. These coalesce forming a continuous tube. The stomach at this time lies in a vertical position. The intestine grows faster in length than does the body, consequently it throws itself into coils and loops on its mesentery, forming the condition found in normal adult life.

In the small embryo the circular muscular layer of the tube first develops. Then when the fetus has become much larger the longitudinal layer develops. Between these two layers, from the mesenchyme, there grows in a third layer from either side, which fills out and helps to form the intestinal tract. From this third layer

develop all the tissues that go to make out the other structures of the canal, such as blood vessels, lymphatics, fibrous tissues and nerves. There is also a third type of muscular tissue in the intestinal tract called neuroid fibres. It corresponds to the muscular fibers in the lower forms of life that contract and functionate without nerve control. Keith has discovered that these are most abundant at the cardiac end of the stomach, the pylorus, ileocecal region and the large intestine. It is due to this tissue that a piece of intestinal tube will contract and move after all nerve fibers have been cut, or even after it has been removed from the body.

There buds out early in fetal life elongations from the spinal ganglia which develop into the sympathetic nervous system. These penetrate the intestinal canal and develop into the sympathetic enervation of that structure. Also from the hind brain there wanders down the vagus nerve which penetrates the muscular walls of the canal and ends in numerous ganglia in the longitudinal layer. Finally there is a mesh of nerve tissue extending from the esophagus to the rectum, discovered by Auerbach which bears his name, that is directly connected with the sympathetic system and also the nerve endings of the vagus. Thus we have a most complicated nerve mechanism controlling the digestive canal from one end to the other. First from the brain itself, the pneumogastric; second, the sympathetic from the spinal cord with its numerous ganglia; third, the mesh of nerve tissue, Auerbach, extending the entire length of the tube and coalescing and coordinating the end fibers of the pneumogastric and the sympathetic systems and fourth, the more or less independent system of Keith, which is independent of the nerve net. The myogenic contractions of this system are slow and definite, but rhythmic, contracting above distending below, ever passing peripherally from mouth to anus.

The irritability and contractility is greater in the upper gastro-intestinal tract, the stomach, than lower down in the bowel. This has no reference, however, to the character of the highly developed nerve net extending along the canal. For the cecum and the region of the appendix and the rectum are provided with a mesh of nerve fibers of both pneumogastric, sympathetic and neuroid. This will account for some of the

marked symptoms when there are disturbances in these regions.

The sympathetic nervous system inhibits the activity of the gastro-intestinal tract, except the sphincters. When acted upon by the secretion of the epinephrin, which is the hormone of the sympathetic system, it diminishes the tone and distends the lumen and causes a period of rest. On the other hand, the pneumogastric is the motor nerve which keeps up the proper activity and tonus to the whole tube from mouth to rectum. It is the impulses passing over this nerve that causes peristalsis, wave after wave in rhythmic succession.

The gastro-intestinal nervous system, or nerve net, being made up of nerve tissue and neuromuscular tissue of the sympathetic and cranial nervous systems with their associated network of plexuses, is almost a separate nervous system, controlled only to a certain extent by the sympathetic and vagus nerves. Thus it is that stimuli may arise in the gastro-intestinal tract and expend its energy on the gastro-intestinal tract without being referred to other centers, or affecting other parts of the body (³). But on the other hand, in pathological conditions, the reverse of this is true and that is why we find so many gastro-intestinal symptoms occurring in diseases not affecting the digestive tube. Therefore anything that will cause stimuli in the reflex arc in the whole gastro-intestinal canal, or associated organs, that may affect it through the intricate nerve plexuses or association of plexuses, may induce normal secretion, or a derangement of secretion or of peristalsis, and produce *Hyperchlorhydria*, pain and gastric symptoms.

The question is then asked, what are the conditions acting upon the reflex arc that will produce an excess of acid secretion?

First: The psychic conditions, worry, excitement, fear, which are only transient. Such patients seldom come to the physician.

Second: Certain functional nervous states, such as hysteria and neurasthenia.

Third: Indiscretions in diet.

Fourth: Insufficient nourishment and overwork.

Fifth: Those of pathological setting either in the stomach itself or associated with it through the intricate nerve net of the gastro-intestinal system. This comprises a very large class and

it is this class that I wish to call to your attention. The lesion either acts as a local irritant on the reflex arc, or else produces a toxic irritant in the blood to the reflex arc that causes an over stimulation and an excess of acid secretion, pain, nausea, and other symptoms. In this class we must place gastric and duodenal ulcers, early stages of carcinoma, mild degree of acute gastritis, gastritis acidæ, chronic appendix, cholecystitis and cholelithiasis, acute hepatitis, cholangitis, anemia, syphilis, tuberculosis, early stages of locomotor ataxia, renal calculi, pancreatitis, mucous colitis, sexual abuse, trauma, enteroptosis and exophthalmic goiter.

In many of these diseases the stomach symptoms are the earliest symptoms present, and in some hyperchlorhydria is the most prominent stomach symptom, as is often the case in the very early stages of locomotor ataxia, ulcer of the stomach and sometimes carcinoma. Again hyperchlorhydria is an aggravating symptom in hidden exophthalmic goiter. How many surgeons have operated for gastric ulcer to find a chronic appendix present. A patient was sent to me recently who had been treated a month for a gastric disease. She had hyperchlorhydria and a severe pain high up in the epigastrium, worse after eating. Her diet had been restricted to the point of toleration. On examination there was found a diaphragmatic pleurisy with a small amount of effusion on the left side. Pain was referred downward. The cause of many a case of hyperchlorhydria has been cleared up by a Wassermann examination. Then there is another class of cases of the infantile type of arrested development, the vertical stomach, the enteroptosis, the gastropnoxis, and the habitus enteropticus, as spoken of by Cohnheim⁶; all have hyperchlorhydria more or less marked due to the anatomical position. We might enlarge on this class indefinitely, but I think I have said enough to make myself clear that hyperchlorhydria is only one of many symptoms.

CONCLUSION

Hyperchlorhydria is not a disease but a symptom and a physician should exhaust every available means to find the cause of the excess of hydrochloric acid before making his diagnosis. In fact he would be justified in withholding his diagnosis, if possible, until he could find out the cause of the irritation which acting upon the

intricate nerve net produced the symptom of hyperchlorhydria.

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TREATMENT OF COMPLETE PROLAPSE OF THE RECTUM IN ADULTS*

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A consideration of the treatment of prolapsus of any of the pelvic viscera usually elicits lively discussion pro and con of the various types of active and passive measures. Too much attention may thus be given to operative technic without a due consideration of the limitations of the particular procedure or of the distinct class of cases to which it is applicable.

The competency of the pelvic floor as a support for the viscera depends upon

1. The pelvic fascia.
2. The levator and muscle.
3. The muscular and fibrous elements guarding the openings through the two foregoing structures.
4. The fat beneath and around all of the structures.

Not enough stress has been laid on the fact that the pelvic floor needs a plentiful supply of fat in the meshes of the connective tissues in the ischio rectal fossæ to develop a cushion to support and compress the anal canal. A deficiency of fat in this region favors sagging of the pelvic diaphragm and relaxation of the anal canal. Restoration of the lost fat, as well as the muscular tone, aids the cure and prevention of recurrence of rectal prolapse.

In principle a prolapse is similar to a hernia and requires the same conditions for its cure. In a hernia the condition is produced, first, by the giving way of muscular and fibrous supports at or near a weak spot in the wall of the abdominal cavity, and, secondly, by stretching of some part of the contained viscera, which allows it to pass more or less through the opening so caused.

In the case of prolapse of the rectum, the con-

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dition results from a failure of the supporting structures of that organ and no one technic will suit all cases, but a careful consideration of the several factors which may cause the prolapse and the conditions present in the case at hand is essential, together with a knowledge of the pathological changes in the rectum, its supports and the surrounding tissues.

Operations Which Narrow the Anal Canal. Complete procidentia cannot be relieved by operation at this point, because, even though the prolapse may not protrude, it is only held within the lower rectum. As a supplementary measure to other perineal work, however, the anus may be restored by a plastic repair of the sphincter or, if that muscle has not been cut, but is only worn out by the continued dilating action of the prolapsed bowel, it may be reinforced by plicating or doubling over of its fibers. This operation, by restoring the anal canal, aims to close up this weak spot in the pelvic floor. In the aged the muscular tone is gone and the sphincter cannot recover its normal contractility and therefore the surgeon must narrow the anal canal.

Resection of the prolapsed bowel is not a very satisfactory operation and is reserved for those cases where the prolapse cannot be reduced because of adhesions or is so inflamed or gangrenous that it is not advisable to replace it; also in those cases suffering with organic stricture or malignant growth.

Various operations have been devised to fix that part of the rectum below the level of the levator and muscle as well as the intraperitoneal portion. Rectopexy aims to restore the bowel into its normal place in the hollow of the sacrum and hold it here by firm adhesions. When the upper rectum and sigmoid prolapse, the rectopexy will not suffice, because a different problem is present. If the anus and lower rectum is narrowed the prolapse is held only temporarily above the sphincters, but it is not in its proper position and relief will be but temporary, because the upper supports have given way or an abnormally long mesentery is present. These conditions must be corrected to obtain a permanent cure. After even the most extensive suturing of the rectum and sigmoid to the pelvic and abdominal wall, recurrence of the prolapse is common, probably due to the inability of the peritoneal union to withstand strain or tension.

In other instances the patient is left in an abnormal nervous state and still continues to complain of dragging sensations, even though the bowel remains where it has been put.

In those cases where the procidentia is a hernia through the cul-de-sac, efforts must be made to obliterate this pouch. In most instances the relaxation or elongation is shared by all of the superior pelvic supports of the rectum and sigmoid, the pathology is not limited to one group and our best results will obtain by closing the pouch of Douglas together with reinforcing the muscle bands of the bowel as well as its lateral supports.

Technic of Operation. The patient is prepared for laparotomy, placed in the Trendelenburg position and the abdomen opened by a liberal median incision extending from the symphysis pubis to the umbilicus. The small intestines are banked out of the way and the uterus is then pulled upward into the abdominal incision. A careful examination is made of the position of the pelvic viscera, the location of adhesions and the depth of the peritoneal cul-de-sac, together with areas of loose attachments.

If small intestines are adherent to the sac they are carefully separated and placed back in the peritoneal cavity. Plastic work to strengthen the pelvic floor by taking up a piece of the broad and round ligaments is done at this time and adds much to the security of the reposition of the bowel.

The pelvic colon is now drawn up until the prolapse is entirely reduced and held taut. Obliteration of Douglas pouch is now begun. Silk suture are passed circularly around the cul-de-sac beginning at its deepest point and continued up, each stitch being placed at one-quarter-inch intervals until the entire pouch is obliterated. Usually six to eight sutures are required. As the sutures approach the rectum the serosa covering the anterior surface of the bowel is included in the stitch. There is always danger of damage to the ureters and the pelvic vessels at this stage and in placing these sutures caution must be observed that these vessels are avoided. It is surprising how deep the cul-de-sac is in these cases and the operation is often extremely difficult, and an exaggerated Trendelenburg position must be used to bring the fundus of the sac, the rectum and the other pelvic contents

as near as may be to the generous abdominal incision.

As the prolapsed bowel is lifted into the pelvis it will be found extremely long, relaxed and flabby, (atonic) with obliteration of its sacculations. The longitudinal muscle bands of the colon and sigmoid are normally shorter than the bowel itself and the contraction of these bands throws the large bowel into sacculations. Relaxation and flaccidity contribute to the distention and stretching as found in this atonic condition. A re-establishment of these pouches enables the white fibrous bands to contract and again provide their supportive action. To this end the sigmoid is drawn up until it is taut from below and the peritoneal coat is abraded along the longitudinal bands by the operator's gauze-covered finger. A fine silk intestinal suture is then inserted in the longitudinal muscle band, carried along within its fibers for one and one-half inches and brought out. One-half-inch farther up the band the suture is reintroduced and another inch and one-half is taken. In this manner one suture is continued the whole length of the sigmoid to the sigmoido-rectal junction. The suture is now carried back in the reverse direction on the opposite borders of the muscle band. As this long suture is tied the muscle band is shortened and the normal sacculations of the bowel is reproduced.

OCCUPATIONAL TREATMENT IN MENTAL DISORDER*

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A considerable percentage of mental patients in and out of state hospitals develop strange ideas and bizarre activities which replace the ordinary sane interests of life and in consequence these individuals cease to make the adjustments requisite to retain their place in the family life and society at large. They get out of step with the mass of their fellows, depend more and more upon their own delusional resources, content themselves with a poorer and poorer way of doing things, and in the end, if allowed to go their own gait, usually suffer a more or less profound deterioration.

This is especially true of dementia præcox patients in whom there is no physical decay to correspond with the mental degradation. The præcox patient who enters an institution at twenty may very well continue to exist there until he is seventy. At least 25 per cent of all commitments belong to this group and, since so few die and so few recover (possibly 10 per cent), a balance between the incoming and outgoing is not struck before at least half of the entire hospital population consists of this type.

The fact that occupation is good for disordered minds has been very definitely known for many years. Of necessity the bulk of the routine work about a state hospital has always been done by patients under the guidance of employees. The majority of these workers are dementia præcox cases and, as a rule, they do not deteriorate beyond a certain point. They form the backbone, so to speak, of the hospital organization. They are interested in what goes on about them, they take fairly good care of themselves, they appreciate entertainments and not a few are paroled home from time to time.

Knowing these things as we have for so many years, it seems strange that it has required so long for this practical observation to take definite therapeutic form. If occupation is good for those who accept it willingly, or even eagerly, why not also give it to the unwilling, apathetic, depressed or anxious patients? Why not give them, too, a chance to win back some definite, practical interest in life, even though it be but a petty one compared with what they have lost, and thus furnish them a harbor where they may find anchor in place of drifting helplessly before the shifting winds of fantasy on a tractless waste of inactivity?

Physical activity is an outlet for the emotions, a stabilizer of the ego. A child is continuously active and quite miserable if not so. With increasing age activity becomes less manifest and physical and mental ills become more and more frequent. Inactivity of the body is physiological in the elderly and aged, but pathological in earlier life. In various types of mental disorder, especially in psychoneuroses, in the depressions and in dementia præcox there is a constant tendency upon the part of the patient to lose interest in matters outside the narrow confines of imaginative thought. Activity of mind and body

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becomes stereotyped because emotion, the vitalizer of mental life, is more or less fixated by abnormal trains of thought. In dementia præcox this often results in an almost complete cessation of ordinary activity.

So, from a physiological and psychological viewpoint, also, there arises then a very natural question: if occupation in the form of some physical activity normally accompanies these vitalizing emotions, why not in dementia præcox, and in certain other mental disorders as well, endeavor to bring about physical activity of an orderly character with a hope that by so doing we may break up this fixation of the emotions and clear the way for the return of wider interests and a partial, if not complete, return to normality? To be sure, we ought not to expect a cure in the more serious cases, but we may hope to make out of the former college instructor a fair hand at raising chickens; out of the stenographer, a good seamstress, etc. What has been thrown overboard in the storm of the acute psychosis often can not be entirely replaced, but almost always something can be salvaged and final shipwreck avoided.

To accomplish this result, as I have said, we can not depend entirely upon industrial occupation, since this presupposes a remnant of initiative in the patient sufficient to permit of his employment under rather haphazard supervision, because to be industrially effective he must apply himself to his appointed task with comparatively little guidance once it is set plainly before him. To stimulate purposeful activity in a patient too worried or indifferent to do any work of his own initiative is quite another matter and requires some considerable organization and a definite program.

Such a therapy must rest upon a firm pedagogic basis and must in nowise be confused with the old type of diversional occupation common to all kinds of institutions where invalids of one kind or another are assembled. Undirected mental patients of their own initiative produce quite wonderful creations at times—handsomely carved furniture, clever inlay work, beautiful bedspreads, fairly good paintings, etc.; in fact, nearly everything that can be made by the hands with simple tools and materials. Such work has therapeutic value, but, unfortunately, only the exceptional patient benefits by it. Under such

a hit or miss system, or rather lack of system, the patient who most needs attention is the last one to receive it. Systematic occupation for therapeutic purposes means the development and thorough carrying out of a comprehensive plan for the patient's re-education and not at all the desultory haphazard occupation that derives its main impetus from the patient's own whim.

For ten years or more occupational treatment for the physically and mentally sick has been evolving along pedagogic as well as practical lines. In 1918, Illinois adopted it as a state program in her hospitals for the mentally sick and at the same time the army gave it a tremendous impetus by adopting it in the reconstruction work for soldiers.

In the re-educational system at present in use at the Chicago State Hospital there are six grades of occupation.

First Grade: Habit training for the most deteriorated cases, carried out upon wards set aside for this purpose. Here the patients are speialed to the toilet, taught to lace their shoes, wash faces and hands, comb the hair, brush the teeth, to eat properly, to play simple games, march, etc.

Second Grade: Kindergarten classes, the name of which is self-explanatory.

Third Grade: The C classes of simple, monotonous, non-intellectual occupation, such as raveling burlap bags and winding the yarn into balls, tearing and cutting up paper and cloth, sorting colored materials for rugs, simple outline sewing, pasting pictures in a book, sandpapering, stringing beads, etc.

Fourth Grade: The B classes, where more is demanded of the pupil, but the work is still rather routine in character, not requiring much initiative but decidedly more concentration and better muscular coordination, as, for example, cutting carpet rags, sawing to a line with coping saw, simple forms of knitting, hooking rugs of simple design, priming wooden toys with paint, plain sewing, etc.

Fifth Grade: The A classes, in which the patient in given work of a still higher type which requires a sustained interest and thoughtful application, such as painting designs, bead work, cutting out patterns, loom-weaving, hand-weaving rugs to pattern, wood-carving, carpentry problems, caning furniture, etc.

Sixth Grade: Pre-industrial courses in book-

binding, fancy weaving and rug-making, type-writing, power-machine sewing, concrete work, metal work, leather work, etc. This grade has not as yet been fully developed, though at times various pupils receive instruction of this character.

The final step in the more successful cases is graduation into the industries of the institution or a return to extra-institutional life. In many cases a less spectacular result is obtained in that the patient is prevented from further deterioration.

To carry out this program, the staff of this department in the Chicago State Hospital consists at the present time of a chief occupational therapist, together with nine specially-trained assistants or occupational therapists and eleven attendant helpers. The class work has been extended to about fifteen wards of the institution in various groups numbering from ten to fifty patients each and totaling nearly six hundred in all.

Inasmuch as the problem is a re-educational one, the pupil naturally enters the grade for which he seems best suited—that is, the doctor prescribes the type of occupation indicated by the patient's psychiatric examination and general behavior. The entire procedure differs from that of an ordinary school in that the individual must be studied and treated as an intellectual and emotional combination. The entire proposition is one of behavior in which intelligence is but one determinant and usually of minor importance.

A special gymnasium has been provided in connection with the Occupational Center, where eight classes are instructed daily, over six hundred patients in all—the first state hospital gymnasium for patients in the country, to the best of the writer's knowledge. During the out-of-doors season the calisthenic exercises, games, etc., are held upon an out-of-door playground, adequately furnished with apparatus such as swings, teeter-totters, slides, giant strides, baseball and volley ball courts, etc.

During the past two years and a half, 2,400 patients have been touched by the activities of the entire department. During the past six months an average of seventy-five patients have been admitted to the department each month, while sixteen have been advanced to the industries, fifteen have been returned to their

homes and sixteen have been advanced to higher grades in the work. And it must be understood that these figures but inadequately represent the good that is done in various ways that can not be statistically represented.

To illustrate concretely the *modus operandi* of this work, let us take the case of John Doe, a case of D. P., who, we will say, comes to the hospital in an excited condition on January 1st and is placed in the hydrotherapy ward where he is examined and treated in the continuous tub. For a month he is too excited to permit of any other treatment, but at the end of this time he is quiet enough to go to the male observation ward, where he is entered in the C class, doing sandpapering and other very simple tasks adapted to the careless, apathetic state in which his acute outburst has left him. He does his class work very poorly in the afternoon class and because of his indifference requires much attention from the teacher (occupational therapist). In the morning he goes with sixty other men from his ward to the gymnasium where he is taught simple setting up exercises and marching. However, he is not bright enough for the games and must be personally directed by an attendant during the exercises, else he will make little or no attempt to follow the leader.

During February this program is carried out without apparent benefit. John becomes worse rather than better; he grows more careless about his clothing; occasionally even soils himself and much of the time appears to be in a brown study.

In March it seems best to transfer him to a habit-training ward where he can be specialed when he gets up, at the toilet, at meals, at bath, and where he is given kindergarten work to do—work with bright colored paper, blocks, etc. His classes here last but an hour or half hour at a time and between whiles he marches to music or learns to toss and catch a ball, etc. He is a dull, slow case, but the teacher never gives up hope. Though he seems to be a dead weight most of the time, there are moments when as if by a lightning flash the former man is revealed peering furtively out through the darkened windows of a ruined habitation, and so she persists. Great courage and almost unreasonable faith are the *sine qua non* of the born therapist.

In April things begin to go a trifle better. John laces up his shoes without reminder; eats more carefully; no longer soils himself, and is promoted to coping saw work which requires considerable concentration and muscular co-ordination. He begins to help the nurses about the ward and smiles when addressed, though he still has little to say voluntarily.

In May he is improved enough to be returned to the observation ward and enters the A class where he is taught to weave baskets and construct wooden toys. At the gymnasium his improvement is noticeable. He follows the drill leader and shows surprising skill upon the horizontal bar.

Improvement continues and June finds him a mem-

ber of the volley ball team and a skillful brush maker. He is passed from occupational therapy to the industries of the hospital. He has gained twenty pounds in weight since his admission and is asking to go home. He is not entirely well. His friends say he is not so alert as formerly and he has no definite plans for the future, but with help he will be able to get along, though perhaps upon a lower level than formerly. Sometime in the future he may even have to come back. Meanwhile, however, John Doe has been salvaged, a result you will agree with me to be well worth while.

DISCUSSION

Dr. Frank Parsons Norbury, Springfield: I think the Illinois State Medical Society as representing the medical work of our State should compliment the work that is being done in our State Hospitals. Unfortunately, the general practitioner is not acquainted with this work. For many years I was identified with it and have helped to organize some of it.

The work of occupational therapy has come into use more since the war, but it had its beginning several years ago, more particularly in Bloomingdale, where it had been the practice for ten years, and also at the Enoch Pratt Hospital near Baltimore.

Through the organization of the American Association for Occupational Therapy (I have the honor of being one of the charter members), this work has been carried out in several states. Illinois stands among the first in this work. It was my privilege during the war as Acting Director for the National Committee for Mental Hygiene to make a survey of all the hospitals wherein any patient could be cared for for mental disorders; this was for the War Department in the event that such care was needed. If the war had gone on for another six months we would have been up against it for hospital facilities and care—we are now, in a way.

In making this survey we included every hospital from Maine to California, and from the Lakes to the Gulf, and when the records came in it was with a great deal of pride that I found Illinois stood among the first with the facilities at hand. There are some states that have more systematized organizations, but when you take into consideration the extent of our State and the manner in which we care for our patients, we have much to be proud of. We have done away with the care of the insane in county houses; all the patients are in the state hospitals. I saw recently the statement in the *ILLINOIS MEDICAL JOURNAL* implying that the institutional men had nothing in common with the practicing physician. They depend on politics for their salaries, etc. This is not so in Illinois. The work is based upon Civil Service and the type of men represent what I think equal, if not superior to, the type we find everywhere in general practice; they are well-trained men. That may be said of some institutions in other states, but not in Illinois.

The development of occupational therapy represents an advance in therapeutics. It is not a cure-all; it may be overdone. When hydrotherapy came in it was hailed as a cure-all—the “water cure of insanity,” and many popular magazines are now so hailing occupational therapy. It is not that, it is just an adjunct, and a very mild one. It is a salvage agent to save what there is left, and bring back, re-educate that individual not only to his environment but to himself; that he can make something out of himself.

Occupational therapy is not applicable to the recent, acute mental cases. That is one of the dangers. In the State hospitals occasionally in acute mental disorders they attempt to apply the occupational therapy, whereas what these patients need is complete rest and overfeeding to put them back to adjustment on a physical basis, then in due time, with the potential energy built up we can then overcome these other conditions. This should be one of the cautions that the superintendent should look out for—not to overdo the occupational therapy in the acute cases.

Dr. Julius Grinker, Chicago: Some years ago in going through the Illinois State institutions I saw living cemeteries. All kinds of patients sat about, without an incentive to move or stir. At that time I felt that something might be done to make life more bearable to these patients. At other times when I passed through the wards at meal time, I saw the same patients carrying bowls and pails and serving other patients with their meals. They did it in such a splendid manner that I thought them assistants, but was told they were just patients suffering from dementia praecox who had been taught to do something and had acquired such facility that the institution could not spare them. When I talked to these patients I found they were devoid of any initiative; that they were true demential praecox patients who could not manage their affairs outside of an institution, but here they did very well and were happy. It occurred to me then that if some such system as Dr. Read had described were inaugurated many cases might be helped, and I am very glad to know that this system is in operation in our State institutions. About a year ago on visiting the Chicago State Hospital I was surprised to find dementia praecox patients occupied and at useful work. I agree with Dr. Read that we can improve those patients, but of course occupational therapy is far from being a cure for insanity. Patients must still be kept in the institution; but their lives may be made agreeable. Only very few can be permitted to leave the institution, for these patients have lost their initiative and cannot compete with their healthy neighbor. Routine work is all they can learn to do, but even that is helpful.

Dr. J. Elliott Royer, Chicago: It seems to me the first thing in these cases is to find the mental level and then give the patient occupation in harmony with this and one in which he or she can be interested. This is quite logical and frequently proves beneficial in private practice as well as in an institution.

OBTURATOR HERNIA*

LEIGH F. WATSON, M.D.

CHICAGO

The first case of obturator hernia was observed by Arnaud de Ronsil, in 1724, and reported to the Royal Academy of Science in Paris. In 1768, G. Arnaud, the son of Arnaud de Ronsil, reported a case of strangulated obturator hernia in which he succeeded in reducing the intestine by taxis, only a small lump remaining irreducible. An incision was made over the tumor and a piece of strangulated omentum was found, which was cut away along with a portion of the sac, and the remaining part was pushed back into the obturator canal. The patient recovered. This was the first case successfully operated on.

In preantiseptic days, the obturator route was used on account of the many dangers and high mortality surrounding intraabdominal operations. In 1822, Martini recommended laparotomy for strangulated obturator hernia, but it was first used by Hilton, in 1847, who was followed by Coulson in 1861 and by Godlee in 1863. Their patients died and the operation fell into temporary disrepute.

Because of the usual absence of a tumor, obturator hernia has always been misleading and, until recent years, diagnosis was practically never made except in case of strangulation, or at autopsy. A majority of the cases of strangulated hernia have been diagnosed during the course of operation for intestinal obstruction.

The contents of the sac almost always consists only of small intestines and sometimes omentum, bladder or pelvic viscera. A partial strangulation, or Richter's hernia, is common (Englisch, Albertin).

In 250 cases studied by Corner, 7 per cent were bilateral; 33 per cent occurred on the left side, and 60 per cent on the right. In 70 per cent incomplete strangulation, or Richter's hernia, was present.

As a rule, the men in whom obturator hernia occurs are younger than the women, though it is very rare in either sex under 50 years of age.

When there is no tumor present, small reducible obturator hernias are seldom diagnosed unless they are accompanied by gastrointestinal

symptoms, or pain along the course of the obturator nerve. The point of exit is deeply placed and the hernia usually descends between the obturator externus and pectineus muscles and lies beneath the adductor longus and pectineus. The hernia must be large to be palpable and should always be felt for on the inner side of the thigh. There may be a slight poorly defined tender swelling, located below and internal to the femoral opening, which suggests, vaguely, the signs of a reducible hernia. Sometimes the patient can feel the hernia slip out and is easily able to reduce it himself, as in the case reported by McMahon. While instances are on record of large reducible hernias, their occurrence is very rare and only a few are found in the literature, such as those of Garengeot, Santiago, Velpeau and Berard, and Mason.

Strangulation in obturator hernia is very frequent because of the unyielding nature of the internal opening of the obturator canal; the bony wall above and the sharp edge of the firm inelastic internal obturator membrane below. The point of constriction is almost always at the neck of the sac, where it is pinched by the internal obturator membrane.

Pain along the course of the obturator nerve is the most important symptom and is present in over 50 per cent of all cases. Attention was first called to it by Howship, in 1840, and again by Romberg, in 1845, and it is known as the Howship-Romberg sign. The pain may be a dull ache, extending down the inner side of the thigh to the knee, occasionally as far as the middle third of the leg and rarely to the great toe. This symptom is most frequently noticed in strangulated hernia and the pain is more severe than when the hernia is reducible. In a few instances, pain has radiated to the hip joint. The limb is usually kept in a semi-flexed position and movement is painful.

In many instances obturator hernia is discovered during an operation for intestinal strangulation; in others, the symptoms are believed to be due to a femoral, inguinal or umbilical hernia, which is operated on, while the strangulated obturator hernia is overlooked and not discovered until a second operation for the unrelieved symp-

*Read at 71st Annual Meeting of the Illinois State Medical Society at Springfield, May 18, 1921

toms, or at autopsy. (Auerbach, Jaboulay and Patel, Martini, Paci, Wilkie.)

Obturator hernias are not infrequently bilateral, or, combined with hernias in this region, especially femoral.

There are two routes for operating on obturator hernia—the abdominal and obturator—and in certain instances it is necessary to use both. The abdominal route is the operation of choice, because it permits resecting the intestine in case gangrene is present, without the necessity of making a second incision, which would be required if the obturator route were used. There are other advantages of the abdominal approach. It enables the operator to confirm the diagnosis promptly; it permits an easier reduction of a nonstrangulated hernia; it allows a safer handling of gangrenous intestine; there is less danger of accidental hemorrhage from the obturator artery and the operation can be carried out more rapidly than by the obturator route.

Occasionally, when the obturator operation is undertaken, it is also necessary to open the abdomen from above, either to treat strangulated intestine, control hemorrhage, or to close the internal openings. Corner and Huggins have reported a case where the internal opening could not be closed through the obturator incision, and it was necessary to perform a laparotomy and invert the sac by pushing it up from the outside. Jaboulay and Patel reported two cases in which the obturator operation was done and in both of these the intestine was so tightly constricted that it was necessary to open the abdomen from above to relieve the strangulation. Albertin encountered a Richter's hernia which could not be reduced through the obturator incision, so he prolonged the thigh incision upward and opened the abdomen above Poupart's ligament.

The inguinal operation has recently been used with success by Milligan and Kinscherf; the latter concludes that this method of approach is especially adapted to a nonstrangulated hernia, but he does not recommend it for the strangulated variety because it does not provide enough room to deal expeditiously with a gangrenous intestine.

THE TREATMENT OF CERVICITIS AND ENDOCERVICITIS WITH BISMUTH PASTE INJECTIONS.*

A. R. HOLLENDER, M.D.

CHICAGO

Gynecologists are agreed that cervicitis and endocervicitis are the most obstinate conditions they are called upon to treat. This is because few of the newer methods of treatment have been thoroughly tried. Tampons and the curette are still employed, but the poor results obtained with these are too well known to every physician. The medicated tampon method has always been a temporizing procedure, while curettage has lent itself only as a means of tiding over the situation. While other procedures have been suggested from time to time, none has been so acceptable as to warrant its wide usage. The result is that a need has existed for an effective treatment. Six years ago, while associated with Dr. Emil G. Beck of Chicago, I was greatly impressed with his method of intrauterine injections of bismuth paste for these conditions. Since then I have persistently used these injections in a large series of cases. The results have been so favorable that I desire to bring the method to the attention of the medical profession.

It is well established that chronic suppuration which involves the uterus is similar, pathologically, to suppurations which occur elsewhere in the body. When the process limits itself to the cervix, as it generally does, the result is a catarrhal condition, described by most authors as *chronic cervical catarrh*. The discharge is the most distressing symptom of the disease, because it is invariably subacute or chronic and unyielding to ordinary measures of treatment. It is highly irritating and destructive to the tissues and its constant flow from the uterus, over the same surfaces of the cervix, produces ulcerations and erosions, which tend to aggravate the original trouble.

Before attempting the treatment a bacteriological examination of the discharge is necessary. The exclusion of cancer, syphilis, tuberculosis and other chronic ailments should be made because in

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some of these diseases, ulcerations of the vagina and cervix are not uncommon. If the erosions are purely local, they should be treated by cauterization. A cotton applicator immersed in a 40 per cent. silver nitrate solution is brought in contact with the eroded surfaces, destroying the local inflammatory processes and tending to stimulate the surrounding tissues to heal over. In doing this care must be taken that none of the excess solution trickles down into the posterior culdesac producing membranous abrasions. It is a good plan to protect the culdesac by placing a pledget of cotton in it.

Now the field must be properly cleansed for the bismuth paste injection. A silver solution soaked applicator is rotated in the cervical opening, coagulating the mucous plug which is thus rendered easy for removal by a dry cotton applicator. The bismuth paste is introduced into the uterus, gently and slowly, by means of an asbestos-packed, urethral-tipped, glass syringe.* The paste employed for this work must be cold and of a salve consistency. The quantity injected should not exceed one drachm; usually one-half drachm is sufficient to fill out the cavity of the uterus. The quantity required in individual cases is gauged by the symptoms, the slight back pressure and the mild pain produced by over-distension of the uterus. The patient will usually complain of a cramp. Forced injections are not to be tried under any circumstances. As soon as the nozzle of the syringe is removed from the cervical opening, the paste, which has been under some pressure, will extrude into the vagina. Some of the paste should then be injected around the cervix and an ordinary wool tampon placed against it. The tampon should be removed in about twelve hours and the patient instructed to take a hot saline douche. The treatments depend upon the individual case. In the more subacute cases, alternate days are chosen, while in the older affections, those of a chronic tendency, one or two injections weekly suffice.

As a rule the creamy pus discharge which is present will change into a clear mucus in a very short time. In those in whom the discharge is mucopurulent, it will persist a little longer, but

a gradual improvement will be noticed in practically all patients.

Occasionally the injection method is unsuitable. For this class, I employ bismuth paste gauze (uterine gauze saturated with the paste). After properly cleansing the parts, the gauze is packed loosely into the cervix where it is left for about twelve hours. For the vaginal type of leucorrhea, the same plan seems to clear up the discharge. Instead of packing the gauze into the cervix, it is packed rather compactly into the vagina. The patient is told to remove the packing in about twelve hours and follow by a warm douche in order to wash away the particles of paste which cling to the mucous membrane.

Therapeutic Action of the Paste.—The theory of the action of the paste is no different in suppurating disease of the cervix than in empyema or in hip-joint disease. And in this connection, and because nothing new along these lines has recently been advanced. I desire to quote Dr. Jos. C. Beck, who a few years ago suggested: "Either the metallic bismuth or the nitrate coming in contact with the diseased tissues produces a local leucocytosis and changes in the connective tissue cells, both of which destroy the vegetable organisms. When the bacteria are destroyed, the disease process undergoes resolution, provided no foreign body, sequestrum, or necrosis be present."

Results in Over Six Hundred Cases.—In reviewing our records to determine the percentage of cures and the average time required for the same, I found no variations from the earlier reports published. About eighty per cent. of the series was permanently cured. The remainder failed to take the full course of treatment or else the condition did not respond because of coexisting diseases of the adnexa or of the uterus itself. The suppurating discharge ceased after an average of eight injections, while in many instances, from one to three injections rendered the discharge normally sterile. Now and then a case will appear with a return of the old symptoms. In such instances the resumption of the treatment for a short time soon arrests the suppuration.

Advantages of the Method.—No method here-

*Bismuth paste consists of Bismuth subnitrate 10 parts, vaselin 90 parts.

tofore suggested has the many advantages of this one. Most important of all, it is non-operative. Curettage has become entirely unnecessary and it has fallen into disuse among many of the prominent gynecologists. The injections are painless and may be carried out in the office as easily as the old fashioned tampon treatments. The technic is simple and may be mastered in a short time. It does away with the need of hospitalizing the patient, the dread of anesthesia, and the dangers and poor results incident to curettage. It may be considered a specific for cervical and vaginal leucorrhea.

Limitations and Contraindications. Among the contraindications, pregnancy is of course the chief one. The reasons should be obvious. Tubal complications, the presence of a severe and deep endometritis, tumors, prolapse and other malpositions, or where the discharge is due to unaccountable causes, are distinct reasons why not to inject bismuth paste into the uterus. To determine facts along these lines, an accurate gynecological history and examination are of the utmost importance.

The selection of the case, then, is necessary to ascertain the appropriateness of the treatment. For one must not lose sight of the fact that injections into the uterus are not without danger. Furthermore, the physician must be thoroughly equipped to carry out the technic accurately. Experience will teach with what degree of gentleness to inject the paste; intuition will tell how much. The promiscuous and indiscriminate employment of the method is likely to do much harm. If the paste is forced into the uterus without regard for the proper amount, it would be the means of pushing ahead infective material, if such is present, lighting up a peritonitis or occluding the Fallopian tubes. The fact that these dangers are possible does not detract from the value of the treatment, since no remedy of any kind and for whatever cause is absolutely safe. In the hands of the novice, therefore, much harm and condemnation may be anticipated. In the hands of the trained, however, the results in the majority of cases will be as favorable as those reported.

11131 Michigan Avenue.

INDICATIONS FOR THE SURGICAL TREATMENT OF FIBROID TUMORS OF THE UTERUS

E. B. MONTGOMERY, M. D., F. A. C. S.

QUINCY, ILL.

That the indications of surgery are today still a matter of debate and involve great differences of opinion is quite obvious to those who have followed the literature of the subject or have listened to the discussions upon it in our National medical meetings, varying from the dictum of the surgeon who would operate on every operable fibroid, to that of the man who considers that it no longer belongs to the surgeon but to the radiologist or internist. First, the exceedingly great prevalence of the uterine fibroid must be admitted. The necropsy statistics of the Massachusetts General and Johns Hopkins hospitals show that 28 per cent of all women over 35 years old have them. This is evidence that the mere diagnosis of a fibroid is not sufficient warrant for surgical interference. All of us have patients who have had fibroids for years giving absolutely no symptoms and causing not even the slightest discomfort; and I take it that all agree that such patients require no treatment either medical or surgical. The women who present themselves for treatment are those with fibroids which are causing symptoms varying in severity and duration and these require treatment either surgical or medical. The most frequent symptom requiring us to intervene is hemorrhage. Up to within a few years, this, if frequent, or in amount sufficient to render the patient anemic was considered sufficient indication for surgical intervention. With the advent of radium and its proper use in treatment of uterine hemorrhage, the necessity for operation on this score has grown increasingly less. Howard Kelly has operated about 2,000 times for uterine fibroids, but as a result of the use of radium in 210 cases considers it as the method of choice in the cases presenting hemorrhage as the salient symptom. From his experience in these cases he has found that it controls hemorrhage, causes a shrinkage of the tumors, and in many cases their entire disappearance and without mortality even in cases presenting serious systemic complications such as tuber-

culosis, nephritis, heart disease, profound anemia and diabetes. During the period in which these cases were treated with radium he operated on 45 patients, all of them presenting some complication not amenable to radium treatment. These were:

Ovarian cyst	9
Appendicitis	7
Pelvis choked by big tumors; intra-uterine radiation impos-	
sible	6
Severe pain	5
Adhesions	4
Gall stones	2
Pelvic inflammation	2
Right inguinal hernia	1
Cesarean sections	1

The claim is also made by Dr. Kelly that if the radium is for any reason found insufficient for treatment, operation may be done at any time without the result being in any way interfered with by the use of the first method.

This position is denied by many operators who contend that if operation later becomes necessary, the use of radium has proved injurious, particularly if any malignancy be present.

The malignancy of fibroid tumors would seem, however, to be present but rarely. Dr. Edward J. Ill, who has had a very large operative experience (529 cases) in fibroids, has never seen a malignant degeneration of a fibroid, although a combination of fibroids and cancer is rather frequent; not to be wondered at when we consider that one woman in every five has fibroids and that carcinoma of the body of the uterus in women above 50 is not infrequent.

The most pressing indication for operation found by Dr. Ill and one that corresponds to my own experience is in those showing symptoms of sepsis. This may originate in the tumor or when there is acute adnexal disease associated with pus, and those following abortion. There can be no question of positive indication for surgical interference in cases of this class, nor in those in which from the location and presence of the growth the patient suffers so much pain as to make life burdensome.

To sum up: surgical treatment is the treatment of choice in cases suffering from sepsis and extreme pain. In robust women under 50 where the tumor is growing and hemorrhage is considerable and in the hands of expert operators whose mortality is low it has the advantage of being more rapid, giving a less protracted con-

valescence and the additional important advantage of making it possible to deal with any complicating conditions that may be found at the time the abdomen is opened. In such cases the mortality today of sub-total hysterectomy should be not over 2 per cent, not greater perhaps than might have occurred in such cases if radium had been used and complicating conditions overlooked.

One case occurred in my own practice in which 6 months after I did a sub-total hysterectomy and the patient had made a perfect recovery a carcinoma developed in the cervical stump. This case has not been reported by me, but evidently many other surgeons are less remiss in such case reports than myself for Dr. John A. Polak of Brooklyn, in *Jour. A. M. A.* for Aug. 28, 1920, has been able to collect in America 256 such cases. Actual sections of uteri removed in 900 cases by Noble and others has shown that carcinoma of the cervix actually coexists in more than 2 per cent. of all fibroids of the uterus. Mayo Clinic report on 3,297 fibroid operations show between 1 and 2 per cent. malignancy. This has been used as an argument for routine total hysterectomy, thus hoping to avoid carcinoma completely developed. While this may argue for the total as against the sub-total hysterectomy in these cases, the success achieved in beginning carcinoma as well as in fibroids by the proper use of radium and its absolute freedom from mortality rate from its proper use, favors it decidedly when we consider the 2 per cent mortality from surgery in the best hands and the frequent recurrence of the carcinoma.

In conclusion then the unquestionable indications for surgery in uterine fibroids are:

1st. Those cases in which complicating conditions such as appendicitis, etc., require surgical interference.

2nd. Septic fibroids or sepsis extending to adnexa.

3rd. Cases with hemorrhage not promptly responding to radium.

4th. Cases which on account of blocking the pelvis completely cause pain or other severe pressure symptoms.

This course, I feel confident, will show better results and less mortality than would the one of operating upon every fibroid causing any incon-

venience, although the experience with the use of radium and the x-ray is yet too limited and too short a time has elapsed since the introduction of this method to warrant positive conclusions.

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DISCUSSION

Dr. F. W. Nickel, Eureka: Dr. Montgomery spoke about the absolute freedom from mortality rate from the use of radium in uterine fibroids. I want to protest against that statement. I think there are cases in which radium has been the cause of death. One case in my own practice in which radium was used, died at the end of 72 hours from symptoms simulating shock. In talking to several men about this experience they told me of similar experiences in a few instances the patients dying from three to five days after the treatment.

Dr. J. H. Bacon, Peoria: Where you have a large mass and suddenly shut off its blood supply with radium and disintegration, you have absorption into the general system. There is also another point that might be raised, the effect upon the uterus from the use of radium in large doses to produce absorption. What effect should treatment described by author have upon the ovaries and upon menstruation?

Dr. E. B. Montgomery, Quincy (closing): With reference to radium I have personally had no experience at all in its use in fibroids, but from statistics as given by Clark and Kelly and others, there are no untoward cases reported after the proper use of radium. I do not think its use is advocated in very large fibroids.

As to the effect on menstruation, I think we may expect in hemorrhagic cases in which radium is used that the menopause will be brought about. That has been the rule in the cases treated by radium.

GERMANY OFFICIALLY STANDARDIZES THE WASSERMANN REACTION

The Ministry of State for Internal affairs in Germany passed an enactment at its Conference of July 11, 1919. This decision was in regard to state control of the Wassermann reaction. Among the recommendations adopted were the following:

1. The Wassermann reaction shall be performed only in those laboratories in which the supervising physicians have had sufficient preliminary instruction. These physicians should be skilled not only in the science of the reaction but in selecting competent personnel.

2. For the execution of the Wassermann reaction, a minimum obligatory fee shall be established all over the kingdom; for the extracts and amboceptors used in the reaction, a maximum tariff.

In the matter of the exact cost of the Wassermann reaction, some unpleasant tricks have been gradually introduced. A great many establishments not directed by specialists ask such low prices for examination that they could not possibly give competent and careful examinations. This attitude is unfavorable to obtaining the most certain results and detracts from better establishments. It is for this reason that the Ministry has recommended the adoption of a minimum fee for carrying out the reaction. On the other hand, the fixing of a high tariff on amboceptors and extracts aims to combat the very high prices that certain houses charge.

3. The vessels in which the material for examination is transported should be always obtainable in all the drug stores.

The bill also specifies that the extracts and amboceptors used must be made according to prescribed directions and exclusively by those having license from government officials.

Dr. Max von Niessen, of Dresden, in the May, 1921, issue of the *Urologic and Cutaneous Review*, opposes the decision on the part of the Ministry. He thinks that the endeavor to place the official stamp on the Wassermann reaction is a great mistake. The reaction, according to him, is not only sometimes unreliable, but positively dangerous. State control cannot eliminate the errors which sometimes occur.

He says further that in the interest of syphilis investigation as well as of social hygiene, the Wassermann reaction should be more scientifically investigated by independent institutes before it is officially accepted.

CHARITY HOSPITAL OPEN TO PAY PATIENTS

Bird S. Coler, Commissioner of Public Welfare of New York City, announces that he has decided to open the city hospitals to confinement cases as a means of relief to families with an income ranging between \$2,500 and \$5,000 a year. Under the new plan the charge at the city hospitals will be \$2.50 per day.

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OCTOBER, 1921

Editorial

WHAT AILS THE MEDICAL PROFESSION?

Already the profession is literally hamstrung, knocked off its pedestal and fed by statute and by limitations to the dogs of fanaticism, ignorance and politics running amuck.

Science is put to bed with the voodooes and charlatans and prostituted to the worst ends that can be devised by a machine-ridden system of conscienceless destroyers of the American Constitution.

Legislation calculated to place the administration of a doctor's arts of healing in the hands of policemen and the sequential courts; to federalize the doctor, both as an individual and as a fractional part of his profession, to wind him around with red tape until he might be a milkman in so far as his medical chance is concerned, is either placed on the statutes of the land or is being hoisted there with fiendish accuracy.

Exactly why the country's physicians should be made the national "goat" rather than the country's lawyers or civil engineers or architects,

would be difficult to explain if it were not that when you touch the efficiency of the medical profession of any land, you have put your finger right on the heart valves of the nation's welfare. Bolshevism was about to win the war for Germany a few years ago. Bolshevism will make kultur victor yet, unless the ballot keeps its hands off the doctors.

Germany socialized her doctors. Germany was very proud of herself. Germany fed her citizenry this chimera of beneficence, and Germany set back on her haunches and waited. And, Germany hasn't had very long to wait. The poorest, most inefficient, most disgusted, most lethargic, most imposed upon set of medical men in the world, and who as a consequence are giving exactly that sort of attention to her people, are to be found in Germany today. The effect is felt everywhere.

Medicine, taking stock of itself, stands appalled at the prospect.

Since efficient proficiency of the healing arts tends to an ultimate undoing of those arts, physicians and citizenry alike stand face to face with a crisis.

The danger is not one threatening the next

century, or even the next generation. Right now the peril sits securely on the hearthstone of every home, and the welfare of the nation, ay, even of the world, demands that some multiple-voiced Paul Revere shall ride to every hamlet in the land and sound the warning. For patriotism, economics, and civilization, to say nothing at all of a certain degree of morality, hinges upon the individual health of the humanity that dwells here on earth.

To be sure, medicine has dealt itself the death blow. Not as a suicide, but as a martyr to the welfare of the world, the profession contemplates its opened veins. And viewing, ponders, "What next?" For only too well surgeons, physicians, hygienists know that a citizenry and its doctors are like a spoiled child and its parents. On occasions and temporarily, boys and girls can run wild and get along excellently without bothering about home and its seemingly exorbitant restrictions and demands. Experience proves the differences between the mirage and the reality—too late youth realizes its folly.

The trend of the times is away from the doctor. The physician has administered himself into a back seat, but down in the front ranks from which the doctors have withdrawn gladly, what demons are seating themselves?

Anarchy, sovietism, lay manipulation of the sick and an elevation of ignorance to the seats of the mighty! God forbid that such a substitution shall maintain to the destruction of the health of nations and of civilization itself.

Generically speaking, the factors contributing to the peril of those sciences that have reduced illness to a comparative minimum and instilled into the minds of the people a maximum sense of false security are:

(a) Lessening of morbidity due to hygienic education and practice.

(b) Diminution of disease due to specific treatments for its specific manifestations.

(c) Overcrowding of medical profession with its consequent debauching through economic pressure of the poorly qualified or ethically un-equipped membership.

(d) State pre-emption of professional privilege and other economic factors affecting necessary revenue.

(e) Increasing disposition to paternalism:

1. Federal interference.

2. State interference.

3. County or township interference.

4. Municipal interference.

(f) Increasing tendency to bureaucracy:

1. Installation of Portfolio of Medical Supervision.

2. Standardization of profession.

3. Destruction of individualism.

(g) Over-specialization of profession:

1. Increased cost of medical service.

2. Abolition of "family doctor."

(h) Centralization at political headquarters of medical control:

1. Washington, D. C.

2. Various state capitols.

3. County seats, etc.

(i) Medical legislation fiat in practice of medicine:

1. Harrison law.

2. Volstead act.

3. Smith-Towner bill.

4. Shepard Maternity bill.

5. Venereal disease control legislation.

(j) Unqualified admissions to license to practice:

1. Christian Science.

2. Chiropractics, osteopaths, etc.

3. Over-trained nurses:

Witness desire during war and since of Red Cross to take over "minor surgery," recommended by red-tape business organizations.

(k) Attempted financial segregation:

1. Tendency of moneyed foundations to despotism in professional mandates.

2. Tendency to make use of free clinics and sociological measures as a playground for wealthy faddists at expense of poor and diseased citizenry.

(l) False premonitions as to self-preservation, i. e., primitive desire to get without giving—"Something for nothing."

Analyzing these corrosives of the armor plate of the nation—the public health—it is easily discoverable that out of the entire dozen only the first two may be classified as the direct result of medical progress. The remaining ten—the genuinely "bad eggs" of the setting—have been hatched from the apathy of the physician to the

commercial possibilities of his skill and the dishonesty of politicians both out of the profession and in it. Of these last it must be confessed that their judgment never fails when it comes to diagnosing the whereabouts of Judas-pence!

Esau sold his birthright for a mess of pottage, so the Scripture teaches. Also that the Man of Galilee was betrayed for thirty talents of silver. Historians of the future are going to be put in the position of having to narrate how the health of nations was sold out to masquerading bolshevists for the vain-glory of a few subsidized men and women through the media of corporate foundations backing secretly bureaucracy, paternalism and an erratic, impossible super-state unless the doctors wake up themselves, wake up the people and demand their rights to practice medicine.

SPECIAL PARKING PRIVILEGES FOR PHYSICIANS SOUGHT

The Chicago Motor Club is to urge parking privileges for physicians. At a meeting held in Chicago September 13, the Chicago Motor Club assumed the initiative in a movement to secure longer parking privileges for physicians. A proposition will shortly be presented to the councils of the Chicago Medical and the Illinois State Medical Societies for approval. At present the parking rules allows only half an hour parking privileges; this time is too short.

The motor club's investigation shows that Indianapolis, Ind., Easton, Pa., Fresno, Cal., Denver, Colo., Tulsa, Okla., Cleveland, O., Billings, Mont., Salt Lake City, Utah, Kenosha, Wis., and the counties of Muskegon, Mich., Knox, Tenn., and Scott, Iowa., all have such an arrangement in effect at the present time.

MEDICAL EXAMINATION

CHICAGO

October 19-22, 1921

The Department of Registration and Education will hold an examination for Physicians and Other Practitioners in Chicago, October 19-22, 1921. The written work will be held at the County Building, commencing October 19. The practical test will be held at the Cook County Hospital commencing October 21.

Completed application and filing fee must be

on file in this office *not* later than October 5.

All communications should be addressed to W. H. H. Miller, Director.

Your attention is called to the requirement regarding the photograph which must be presented the first day of the written examination.

W. H. H. MILLER,

Director.

THE RIGHT OF THE PHYSICIAN TO TREAT HIS PATIENT WITHOUT IGNORANT LAY INTERFERENCE

On this question the medical profession must stand united. On this issue depends the future of medical practice. When laymen acquire the power to direct, vise and circumscribe the regimen of physicians in their medication of the sick, the doctor's usefulness ends and the sooner he realizes it the better for him.

Lay regulation of medical practice is well exemplified in the Harrison law, the Volstead act, the proposed Sheppard-Towner Maternity bill, and many other measures that have been attempted to be enacted into law in most of the states and in the national government. These are beautiful examples of lay attempt to regulate medicine. A proper protest against lay dictation in medicine was recently passed by the therapeutic society, assembled in convention at Washington, D. C., and was sent to President Harding and Congress. The protest was against further legislative interference with medical treatment; that attempts by paid propagandists with no medical training, to dictate to legitimate practitioners what agency they shall or shall not employ for the relief of their patients, was absurd and presumptuous and prejudicial to public interests. The aim of these propagandists is to replace competent medical responsibility with the incompetent irresponsibility of laymen. This is an insulting invasion of the professional prerogative and a gross injustice to the sick who are entitled to receive whatever drug in the judgment of their doctor may aid them to get well.

We insist that the best interest of the public demands that the medical profession be permitted to continue without sacrifice of domestic privacy, personal free choice, self-respect or self-reliance; without transferring control from medical scientists to political opportunities without overbur-

dening the sick citizen with expense; without swamping the state with a deficit each year of one hundred million dollars as Compulsory Health Insurance will do. Without subordinating the agencies of healing to political domination under compulsory health insurance, state medicine or national socialization of medicine; and without clubbing them into subjection or innocuousness with a coercive medical practice act which invests an administrative department with punitive judicial power of suspension and revocation of license without corresponding judicial responsibility to any appellate court.

We should be better organized so that we may have a true consensus of medical thought on those subjects which concern our profession particularly, and which react adversely on the people generally.

PRESIDENT HARDING AND HIS DEPARTMENT OF PUBLIC WELFARE

The Fess-Kenyon Bill, providing a department of Public Welfare is regarded as an administrative measure. It is still before the committee to which it was referred.

President Harding will insist upon the creation of a department of public welfare and will exert all the power of his office to this end. His attitude in this respect indicates a most bitter contest in Congress.

It is stated that the President soon will address a letter to some member of Congress in which he will urge the bill's passage. During the 1920 campaign Mr. Harding was approached by many philanthropically inclined people, each demanding some specific Government reform. He conceived the idea of satisfying them by pledging himself to the creation of a Department of Public Welfare and the addition of a member to the Cabinet to devote himself exclusively to social betterment.

SUPPORTED BY WOMEN

The announcement of his intention to create the new department did bring much support from social workers and it pleased another large group of voters—the women—in that it led to the suggestion that a woman would be named secretary of public welfare.

There is no record that Mr. Harding himself

ever promised that a woman would be so appointed, but women connected with the Republican campaign headquarters made this assertion and it was noted by Mr. Harding.

The women's organization has taken it for granted that a woman would be appointed to the new Cabinet place and they have strongly supported the Fess-Kenyon Bill accordingly.

FEW HEARINGS HELD

Only a few days of hearings have been held by the Senate Committee on Education on the Welfare Department Bill, but these have been sufficient to indicate that the measure is in for a peck of trouble. It was as a result of the great opposition developed that the word came from the White House that the President referred to the proposition as one to which the Administration was irrevocably committed, and which he must support to the limit.

Strange as it might seem, the proposal seems to be opposed by virtually every one of the social reform groups whose insistence that the legislative enactments led to the promise of a Department of Social Welfare. In the forefront of the opposition are the organizations of school men who have favored the creation of a Department of Education. The plan for such a separate department is before Congress in the so-called Smith-Towner Bill. The educators assert the establishment of a Bureau of Education under a secretary of welfare would be in no sense an improvement over the existing bureau, under the secretary of the interior. They demand a member of the Cabinet strictly their own and they will be content with nothing less.

LEGION AGAINST MEASURE

Bitter opponents of the department of public welfare were the organizations of returned soldiers, their objections closely parallel those of the educators. Before the Fess-Kenyon Bill was introduced, the American Legion had prepared and introduced the Sweet Bill creating a veterans' bill and providing for consolidation of all government activities regarding soldiers in a new bureau of the treasury department with an assistant secretary at its head. The Sweet Bill became a law on August 9th. This latter feature may withdraw the opposition of the Legion who probably will not care to become further involved

in the row which has arisen in the department of public welfare proposal.

POLITICAL OPPOSITION

Not so much in the open, but equally potent are the elements of political opposition to the Kenyon-Fess Bill.

First of these is the opposition to the naming of a woman member of the Cabinet. The leaders of the Republican old guard have bitterly resented this suggestion of female intrusion in the higher political field from the beginning. There is a considerable element in Congress which will vote against the bill as it now appears, unless President Harding publicly disclaims any intention to appoint a woman to the secretaryship.

Another element of opposition has been created by the suggestion that the President's personal physician, Dr. Charles Sawyer, is slated for the position of secretary of public welfare. This suggestion has grown out of the fact that Dr. Sawyer took a hand in preparation of the Kenyon-Fess bill and has been the chief spokesman of the President in its advocacy.

THE CHICAGO MEDICAL SOCIETY AS VIEWED BY THE RETIRING PRESIDENT

LUDVIG HEKTOEN, M. D.

PRESIDENT'S ADDRESS AT ANNUAL MEETING,
JUNE 15, 1921

Called from the ranks, I entered on the office of president-elect with fear and trembling. As chairman of the council I foresaw myself hopelessly ensnared in parliamentary tangles, and wholly unfamiliar as I was with the traditional methods of procedure, I feel that my lucky escape from public disgrace is due to the kindness and forbearance of the councilors and the quiet but firm suggestions from the secretary. As I watched the council conduct the affairs of the society through its various committees, the question often came into my mind whether perhaps greater efficiency would not result if the council were permitted to place itself under the guidance of chairmen of its own selection. Sooner or later there may appear again a president-elect as unfitted from lack of experience as I was for the work in hand, and the results may be worse.

I am deeply impressed with the opportunity

the president has to further the interests of the society. I regret that in my case the scope of his opportunity was not grasped fully until my term drew near its end. I regret especially the neglect to push with greater vigor and persistence the efforts to increase the membership. At present this includes about 70 per cent. of the physicians in Cook County. Surely at least two-thirds of the outsiders are eligible and should become members for their own good as well as that of the organization. In most branches little or nothing seems to be done by the officers to secure new members; one of the pressing tasks, requiring a definite system and persistence, of each branch organization should be to bring into the fold all the physicians in good standing in its district.

THE WEDNESDAY EVENING MEETINGS

In common with my immediate predecessor, Dr. Fowler, I must confess to being agreeably surprised indeed by the variety and value of the Wednesday evening meetings, which merit a much larger attendance than usually is the case. I have in mind now especially the meetings at which strictly "home talent" fills the program. I have observed that the merits of a paper or discussion do not bear any constant relation to its length, and also that the relativity of values is not well understood by all that read papers or take part in the discussions. The acquirement of adequate terminal facilities should be encouraged, and had I the power I would limit the ordinary medical paper to 15 minutes and individual discussions as a rule to three minutes.

"A tale should be judicious, clear, succinct;
The language plain, and incidents well linked;
Tell not as new what everybody knows,
And, new or old, still hasten to a close;
There, centering in a focus round and neat,
Let all your rays of information meet."

At no time has there been so much productive activity in all branches of medicine and the allied sciences in Chicago as at present, and it would be well if more results of general interest of such work could be presented in these meetings.

The amount of first class material now printed in diverse medical society proceedings and bulletins in Chicago is more than enough for a weekly journal. Undoubtedly consolidation and co-ordination in these matters would give greater

strength in all directions than results from the present more or less haphazard methods, and increase the fame of Chicago as a medical center. In any case, the abstracts of the papers and discussions of our meetings should be revised and edited carefully before they appear in print. It is important for the benefit of our members and others, that the proceedings be recorded in a reliable and scholarly manner as befits a great medical forum.

DIRT BEING EXPLOITED AS A LIFE SAVER.

According to the *Detroit Free Press*, August 26, 1921, Henry F. Vaughan, the lay health commissioner of Detroit, Michigan, says: City life and a little dirt now and then assures a longevity.

To substantiate his beliefs, the commissioner, Thursday, cited figures from the army camps during the war showing that those which had the lowest death rates housed soldiers originally from the cities.

"If you eat too much dirt you will die; if you eat a medium amount of dirt you will live long; if you don't eat enough dirt you will die," the commissioner said his studies show.

The city man, he said, is exposed to germs constantly and "eats dirt" in quantities, thus "establishing ferments in his body which dissolve germs."

Note: In reading the above one will see that "preventive medicine" is getting back to earth. Shades of all the preventers, when "dirt" is being exploited as a life saver and a life giver. Nothing new under the sun and the old proverb of having to eat a peck of dirt is coming back into its own.

GOVERNMENT CONTROL A MENACE. DOCTORS BEWARE OF THE FIFTY FIFTY PLAN.

Mr. Hurley on his retirement from the chairmanship of the Shipping Board has given a very good verdict on public and private ownership. As soon as the Government had to assume the burden of cost, employer and employee entered into a wild scramble for money and more money. Prices soared rapidly, while interest and incentive waned:

For new shipyards we furnished the capital, we guaranteed the wages, we provided the profits. What natural incentive was there to keep costs down? As we view the opposite conditions under which our industries have grown to their present vast extent, how could we look for efficiency under such a system? And if we had government ownership over the country, nationally, taking in all the public utilities, the same results would follow. More, you wouldn't have outside of the Government-owned plants that efficient competition which remains the life of trade.

This is the vital weakness of public ownership. It eliminates healthy competition and destroys initiative. There is no interest in the individual if there is no rivalry and if come what may the Government pays the cost. Private enterprise should be stimulated by the statement of Mr. Hurley to continue, and above all to improve.

CONDEMNATION OF THE SHEPPARD-TOWNER MATERNITY BILL

Criticisms by Senator William E. Borah, Representative Alice Robertson, Civic and Other Organizations, as Abstracted in the "Capitol Eye"

Senator William E. Borah: The Maternity Bill appropriates a very considerable sum of money. The amount which it appropriates or authorizes, in the first instance, however, is small compared to what will be necessary a little later. With bureaus, or departments, the appetite increases with what it feeds upon. In addition to the federal appropriation, there will be a call from the states for large sums. And it is well to remember that the taxpayer is the same for the state taxes as for the federal government. It makes little difference whether one government, the state or the federal, imposes the tax. There is only one people to take care of both taxes. Furthermore, under the present terms and stipulations of the bill very little of the appropriation will get further than to take care of the additional offices and salaries which they will require.

It seems to me, therefore, that this measure, in the present condition of the treasury, and in view of the harassed and discouraged situation of the taxpayer, ought not to be urged. Just as rapidly (yes, far more rapidly) as we find a place where we can reduce expenditures, there is someone who rushes in with a plan to increase expenditures elsewhere. The result is that, with all our talk of economy and the reduction of taxes and the insistent demand everywhere for economy, there is no economy and taxes mount higher and higher each and every year. If every scheme, or plan,

good, bad or indifferent, is to be urged and propagandized through a trembling congress, we are heading for an economic breakdown.

The coming winter will find many a mother in agony, not for want of instruction as to how to care for her child, but for want of money to feed and clothe and keep warm her child. The Maternity Bill would be a delusion to the thousands of mothers thus situated. In other words, the conditions which confront us now are serious, immediate and commanding. We should not expend a dollar nor impose a single item of expense upon the people of this country until relief from taxes is in sight and until men and women, oppressed, hungry and out of work, have work and are sheltered and clothed. Strange as it may seem to some people, this country at the present time faces a situation even more serious than that in many respects which confronted them during the war.

The senate voted to recommit what is known as the soldiers' adjustment compensation bill. The principal and controlling reason for that recommitment, as it was advised by the debates and by the message of the president, was an economic one, want of money, the condition of the treasury. Certainly we ought to be consistent. It is really ludicrous to refuse the soldiers on the grounds of economy and then pass such measures as this. Without consistency and determination, we shall not relieve the people in the slightest, and unless we do relieve them such measures as these will be poor compensation for a depleted treasury, an immense deficit, and an increase of their taxes.

Representative Alice Robertson: As the bill stands, its only purpose is to build up more of a federal machine and to loot the treasury under the guise of a worthy object.

The bill does nothing other than appropriate money. No restrictions are thrown around its expenditure and no scheme or skeleton of procedure devised for its operation. If the caption were left off, one would be at a loss to ascertain its purpose. Its entire plan is left to conjecture. In a law court, it would be thrown out for indefiniteness and uncertainty.

But even otherwise, the federal government is going into too many projects and I do not believe the American people will much longer stand its continual invasion of the home and of personal rights and privileges. In other words, they do not sanction the German system of paternalistic government.

A mere glance at this bill shows that "maternity and infancy" are mentioned only four times. One senator characterized the bill which he voted for because the women wanted it, though he told them he disapproved it as "a very large harness on a very little horse"—in other words, "all appropriation and administration and negligible help."

The club women of America, after all, represent but a small percentage of its 51,000,000 women. All the arguments given by the proponents of

this bill are based on estimates, there being no actual dependable figures in the absence of universal registration. But if they were reliable and the need so great there is danger that the passage of the bill would be obnoxious beyond endurance as handled by professional reformers of family life. The mortality among mothers and babies of the so-called "idle rich" is greater than among the poverty-stricken toilers. The welfare worker of the Children's Bureau is in duty bound to carry her inquisition alike to palace or hovel. She is more likely to be admitted to the hovel because of the greater simplicity of receiving guests. The bill does not allow her to demand entrance.

The worst possible lie is of the sort that Ananias and Sapphira told—the truth, but not the whole truth. Without complete statistics, which are not to be had, the "sob-stuff" claim that 680 babies die every day from the failure in enacting this bill is absurd. A bill that does not provide medical or nursing attendance, or milk or baby clothes, or anything that would give immediate aid is not tangible help of the kind that the general public infers would be given, but the establishment of an autocratic, undefined, practically uncontrolled yet federally authorized center of propaganda.

Were the pitiless light of real publicity turned upon the methods which have brought the "maternity bill" thus far toward enactment, its most ardent proponents, in my belief, would in all fairness be compelled to allow time for the as yet unheard majority of women, who know nothing of its proposed legislation, to learn the facts and to speak for themselves.

NATIONAL ASSOCIATION OPPOSED TO WOMAN SUFFRAGE

J. S. Eichelberger, Editor, *The Woman Patriot*: The Sheppard-Towner Bill is a poor imitation of various "maternity systems" adopted in foreign countries. But whereas all these foreign systems do provide either cash benefits or medical and nursing care, the Sheppard-Towner Bill provides nothing but "investigation and advice," reports and talk. No part of the fund can be used for any maternity hospital or equipment, no destitute mother can secure a bed, no baby a bottle of milk, under its provision.

Social progress is always the result of individual thought and effort. The federal government, which has failed in its own constitutional field of caring for disabled veterans, can no more promote the welfare of mothers and babies by forcing arbitrary "standards" on them, than it could promote industrial progress by adopting legislative "standards" for automobiles or aeroplanes.

CITIZENS MEDICAL REFERENCE BUREAU

The Sheppard-Towner bill would serve as an entering wedge for numerous other measures centralizing public health work and costing hundreds of millions of dollars annually.

It would mean sending out propaganda for making various fads and fashions in medicine compulsory, thereby stirring up further unrest among the people.

Public health work is chiefly a local and state problem.

The federal state aid plan is economically unsound.

Statistics offered are misleading, there being no assurance that any benefits would be derived.

To call this a women's bill would stamp it as class legislation. Opposition among both sexes is overwhelming.

WOMAN'S MUNICIPAL LEAGUE OF BOSTON

Mrs. William Lowell Putnam: In childbirth two lives are at stake and in the care of this important function those two lives depend upon the care given the mother; hence this care should only be given by trained physicians and not administered by lay people.

The Sheppard-Towner bill puts the medical care of maternity, though administered by the State Boards of Health, completely under the control of a lay woman, the chief of the Children's Bureau. She can not only withhold money from them, but through her control of their plans for spending it she will inevitably exercise an influence not only upon the expenditure of the small sum appropriated by congress but the very much larger sum which the states are themselves already appropriating, for it will not be possible for the State Boards of Health to administer one fund in one way and the other in another.

ILLINOIS STATE MEDICAL SOCIETY

The Sheppard-Towner bill deals with problems 95 per cent medical—hence medical not lay supervision is demanded.

The maternity question is a matter for state and local authorities. It is highly improper for the federal government to usurp legitimate activities of the states.

The Sheppard-Towner bill is a mixture of paternalism, socialism, state medicine, and sentimental politics. It means unfair, unequal, and greater tax burdens.

The political machine thus created will menace the efficiency of the health activities of every state.

The Children's Bureau is given dangerous power.

Federal health activities should be directed by the United States Public Health Service, not by a lay bureau.

NEW YORK ANTI-VIVISECTION SOCIETY

S. Saloman: We believe that the bill is entirely unnecessary.

That it entails a very serious drain upon the United States treasury and the state treasuries that neither can stand at this particular time.

That the bill is so indefinite in its scope that it is practically a blank check given to the interests that possibly may be back of the bill, leaving to them to write in their duties, their powers and authority, possibly their obligations, either to the public or to themselves; for that particular reason we believe it is an exceedingly dangerous bill and that the arguments of those for the bill, if examined, will prove that to be a fact.

That it is exceedingly dangerous to the public welfare and an entering wedge to what we conceive to be state medicine, and in that way we destroy or hamper to some extent the medical freedom of the individual that is guaranteed by the Constitution of the United States.

THE MEDICAL LIBERTY LEAGUE, INC.

Mrs. Jessica Henderson: We are opposed to this Sheppard-Towner bill because it is one of the many bills before congress that creates and entrenches the control of state medicine and we believe with Herbert Spencer that medical liberty is just as important as religious liberty.

We are in favor of a maternity benefit and an endowment bill where women may choose their own visitors.

It is stated that there are 17 other countries that have lower death rates than we; and we have from one to ten times as much medical attention as prevails in those countries. That alone shows that the medical attendance is not at the bottom of this high mortality.

CONSTITUTIONAL LIBERTY LEAGUE OF MASSACHUSETTS

As drafted and presented we suppose this bill to be in contravention of the constitutional principles of our government.

It would constitute an improper and unjust infringement of the rights of the several states to govern themselves and their people.

It would set a very bad and dangerous precedent for the introduction of all kinds of miscellaneous new features of government.

It would multiply departments and offices, involving very considerable, and, as we believe, practically useless expense. It would certainly strengthen the present deplorable tendency of our people toward bureaucracy; and we are convinced that this tendency should be promptly checked lest our people become *bureau-crazy*.

MASSACHUSETTS MEDICAL SOCIETY, N. W.

Dr. Alfred H. Quessy: Physicians oppose maternity legislation, state or national:

Because such legislation is unnecessary and superfluous. It is not really a health measure as it is claimed, but is essentially socialistic in tendency as it is in Germany and elsewhere, and we don't

want socialism parading in this nation under the guise of health measures.

Because maternity legislation and its accompanying bills are in error, are exaggerated and are based upon assumptions which are fundamentally wrong.

Because they point to the wrong cause and the wrong remedy for maternal and infant mortality.

Because they are a direct attempt to give autocratic power to the department of health in each state where advisory power alone should prevail.

Because they are an entering wedge to state or national control of the practice of medicine.

Because they are an invasion on the realm of private rights, personal liberties and constitutional safeguards.

UNITED STATES PUBLIC HEALTH SERVICE

H. S. Cumming, Surgeon-General: The Public Health Service believes that the most important factor in conserving the health of the people is the development in local communities of a sense of responsibility for their own health conditions to the point where they are willing to finance and support adequate local health organizations.

The most effective work in the protection of maternal and child life will be done by such local health organizations as a part of the general health program for the protection of the health of the people in that community.

Rather than create additional medical agencies, the fullest utilization should be made of the medical and sanitary personnel of the Public Health Service; and

Instead of giving the health problem of the country fractional treatment, the aim of the bill should be to support a general health program of which, of course, the protection of maternal and child life would be an important part.

PHYSICIAN TO THE LATE CARDINAL GIBBONS

Dr. Charles O'Donovan: The Sheppard-Towner "Maternity Bill" is an intrusion of the federal government into matters distinctly local which can be handled far more satisfactorily and at less expense by the states or counties. Sad and bitter experience has taught the truth of this statement.

To produce any result whatever, far more money than is mentioned in the bill will be required; the purpose seems to be to start the bureaucratic ball rolling and let the future take care of itself. The people already sadly burdened by taxation should at once stop this needless extravagance.

The bill provides in substance, records, pamphlets, travel, etc.—offices for politicians, authority for those very slightly prepared to use it properly,

but little or nothing for mothers and children. The excellent purpose of the title is not attained by the bill.

Let everyone read the bill carefully; that should be enough to kill it.

MASSACHUSETTS CIVIC ALLIANCE

Eben W. Burnstead, Secretary: This society is opposed to state care of maternity. The infant mortality in the United States is not high. We believe that a change of this system that we now have from private to public control will not give you any less infant mortality, but it would tend to a greater infant mortality because you will have a system that has not worked efficiently in other matters, to take the place of a system that has made America what she is.

MAIN STREET DISCUSSES THE "MATERNITY BILL"

(Editorial, Fitchburg (Mass.) Daily Sentinel)

THINKING IT OVER

The maternity benefit bill is only one of the many so-called "social welfare" measures that are being advocated at the present time. Sickness, invalidity, old age pensions, unemployment insurance—these are some of the Protean forms of state aid which, if made compulsory by legislation, would sap the spirit of thrift and self-reliance, and would breed, in its place, a feeling of dependency on the state.

There is an economic question that enters into all proposed legislation of the same character as the maternity benefit bill. Will not these measures that are proposed so abundantly, and as it would seem, so carelessly, bring greater evils in their train, than those they purpose to expunge? One most certain result of the adoption of these state relief measures would be the establishment of a powerful bureaucracy, prone to work for its own aggrandizement rather than for the public welfare. If such a bureaucracy should once get into the saddle, with the usual propaganda for its perpetuation and enlargement carried on at the expense of the taxpayers, it would take more than a mere failure to function properly to unseat it.

Never has thoughtfulness and caution been more needed than at present. A wave of emotionalism has swept over the country. Whatever is, is assumed to be wrong. Change, regardless of its results, is assumed to be synonymous with progress. The advocates of change resort to a style of reasoning which is none the less fallacious because of its being so familiar. Practically any public measure, nominally designed to change existing conditions and labeled a "welfare bill," can secure wide and unquestioning support, regardless of its merits. The unscrupulous politicians, office-seekers, professional agitators, uplift zealots, who are palpably exploiting such measures, are being

exalted in the esteem of a deluded public. Those who urge sanity and caution, or who dare to protest when wanton injury is threatened to the social fabric, are being branded as "reactionaries" or vilified as selfish opponents of progress. It may be granted that there is something in this desire for state aid in the directions here indicated that is flooded with feeling, nobly prompted. But it ought to be granted that this desire would profit much from a dose of rational criticism. The fancy that, by raising funds, by setting in motion committees, by hurrying through legislation, the ideals of perfection can be realized, needs to have its rein checked. There is need of examining all these undertakings for the realization of the dream of perfection in the strong light of reason.—*Extract.*

INFORMATION WANTED

This caption might also be written with a question mark, that is, "Do you want information?"

It is a fact, admitted by most of us, that little can be accomplished without organization and co-operation. There was founded, some ten years ago, an association of which we have heard very little but which has accomplished much for the doctor who, in the legitimate practice of his profession, has had to fight inimical legislation on the one hand and the invasion of an army of drugless healers on the other. In the face of countless obstacles, the doctor has held his own, but he is still fighting for the privileges and prestige to which he is entitled.

The organization we refer to is not a medical society; yet its interests are all with the medical profession. We refer to The American Pharmaceutical Manufacturers' Association, founded ten years ago.

The medical profession can hardly realize the vast amount of good this association has accomplished in fighting legislation, both national and local, which was unjust to physicians and destructive to the growth of better pharmaceutical methods. In addition to the effective legislative work in defense of the doctors' rights, much has been accomplished in the way of laboratory efficiency, better manufacturing methods, and the elimination of waste, all of which has indirectly benefited the doctor in his combat against disease.

There are other larger organizations which have been active in the medical field. The doctor is acquainted with these, and with their work, however, there is an opportunity for the physician to become better acquainted with the American Pharmaceutical Manufacturers' Association, and to make use of its various committees. In turn, the association wants information from individual doctors as to the problems which confront them in their local fields, as well as from the medical profession as a whole.

If you are cognizant of any legislation pending in your state which, in your opinion, does not give the doctor a square deal, it will pay you to pass

the information on to the American Pharmaceutical Manufacturers' Association. If there is any information that you desire in the field of manufacturing pharmacy, you will be served efficiently on request. If you have any suggestions to offer, they will be gladly received and promptly attended to at the headquarters of the association, 32 Liberty street, New York City.

TRI-STATE DISTRICT MEDICAL ASSOCIATION

ANNUAL ASSEMBLY PROGRAM

Milwaukee, Wisconsin, November 14, 15, 16, 17
Headquarters for general meeting and clinics:
Auditorium, Fifth St., between State and Cedar
First Day—Monday, November 14, 1921, 7 A. M.

1. Diagnostic Clinic (Medical).

Dr. Frederick Tice, Professor of Clinical Medicine, University of Illinois, College of Medicine, Chicago, Illinois.

2. Diagnostic Clinic (Surgical).

Commander William Seaman Bainbridge, United States Navy, Medical Department, New York, N. Y.

Intermission

3. Diagnostic Clinic (Medical).

Dr. Charles P. Emerson, Dean and Professor of Medicine, Indiana University, School of Medicine, Indianapolis, Indiana.

4. Diagnostic Clinic (Surgical).

Dr. Hugh Cabot, Dean and Professor of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

Afternoon Session—I P. M.

5. "Carcinoma of the Esophagus and Its Treatment with Radium." (With pictures.)

Dr. C. W. Hanford, Chicago, Illinois.

6. "Recent Advances in Chemistry as Aids in the Practice of Medicine."

Dr. Harold C. Bradley, Professor of Physiological Chemistry, University of Wisconsin, Madison, Wis.

7. "Some Considerations of the Graham Steell Murmur."

Dr. Frederick Tice, Professor of Clinical Medicine, University of Illinois, College of Medicine, Chicago, Illinois.

8. "Errors in Orthopedic Diagnosis."

Dr. Reginald H. Sayre, Professor of Orthopedic Surgery, University and Bellevue Hospital, Medical College, New York, N. Y.

9. "X-Ray Treatment of Carcinoma of the Breast."

Dr. Arthur W. Erskine, Cedar Rapids, Iowa.

10. "Type and Treatment of Severe Anemia."

Dr. Alfred Stengel, Professor of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Evening Session—7 P. M.

11. "Recent Development in Tardy Malnutritions of Childhood."

Dr. H. C. Blankmeyer, Springfield, Illinois.

12. "Some Aids to Diagnosis in Medicine."
Dr. Henry Enos Tuley, Dean and Professor of Pediatrics, University of Louisville, School of Medicine, Louisville, Ky.
13. "Actinomycosis—Diagnosis and Treatment."
Dr. Paul White, Davenport, Iowa.
14. "Hyperthyroidism."
Dr. William E. Schroeder, Chicago, Illinois.
15. "The Treatment of Chronic Nephritis."
Dr. Charles P. Emerson, Dean and Professor of Medicine, Indiana University, School of Medicine, Indianapolis, Ind.

Second Day—Tuesday, November 15, 1921—7 A. M.

1. Diagnostic Clinic (Pediatrics).
Dr. J. Claxton Gittings, Professor of Pediatrics, University of Pennsylvania, School of Medicine, Philadelphia, Pa.
2. Diagnostic Clinic (Surgical).
Dr. Arthur Dean Bevan, Professor of Surgery and Head of Surgical Department, Rush Medical College, Chicago, Illinois.

Intermission

3. Diagnostic Clinic (Medical).
Dr. Alfred Stengel, Professor of Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.
4. Diagnostic Clinic (Surgical).
Dr. Reginald H. Sayre, Professor of Orthopedic Surgery, University and Bellevue Hospital, Medical College, New York, N. Y.

Afternoon Session—I P. M.

5. "Hemorrhoids and Hemorrhoidectomies."
Captain A. M. Fountleroy, M.C., U. S. Navy, U. S. Naval Hospital, New York City.
6. "Clinical Interpretation of Blood Chemistry Findings in Diabetes and Nephritis."
Dr. Frank Wright, Chicago, Illinois.
7. "Tumors of the Breast."
Dr. Arthur Dean Bevan, Professor of Surgery and Head of Surgical Department, Rush Medical College, Chicago, Illinois.

Intermission

8. "The Effect of Occlusion of the Coronary Arteries on the Heart's Action and Its Relationship to Angina Pectoris."
Dr. Warfield T. Longcope, New York, N. Y.
9. "Memory Defect of Korsakoff Type Observed in Multiple Neuritis Following Toxemia of Pregnancy."
Dr. Frank A. Ely, Des Moines, Iowa.
10. "A Neglected Factor in Surgical Infections."
Dr. Hugh Cabot, Dean and Professor of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

Evening Session—7 P. M.

11. "A Disease in Childhood Which Commonly Is Unrecognized."
Dr. J. Claxton Gittings, Professor of Pediatrics, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

12. "Surgical Treatment of Fractures."
Dr. John M. Dodd, Ashland, Wisconsin.
13. "Various Problems Met with in Fractures of Both Bones of the Forearm—Mechanically and Surgically." (Lantern slides.)
Dr. Paul B. Magnuson, Chicago, Illinois.
14. "Grafts of Whole Substance Bone."
Dr. John P. Lord, Professor of Orthopedic Surgery, University of Nebraska, School of Medicine, Omaha, Nebraska.
15. Discussion of last three papers led by Dr. Reginald H. Sayre, New York, N. Y.
16. "The Thyroid Gland and Intestinal Stasis."
Commander William Seaman Bainbridge, United States Navy, Medical Department, New York, N. Y.

Third Day—Wednesday, November 16, 1921—7 A. M.

1. Diagnostic Clinic (Medical).
Dr. Warfield T. Longcope, recent Professor of Medicine, Columbia University, College of Physicians and Surgeons, New York, N. Y.
2. Diagnostic Clinic (Surgical).
Dr. Charles H. Frazier, Professor of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Intermission

3. Diagnostic Clinic (Gynecological).
Dr. William P. Graves, Professor of Gynecology, Harvard University, School of Medicine, Boston, Mass.
4. Diagnostic Clinic (Surgical).
Dr. George Armstrong, Professor of Surgery, Faculty, McGill University, Montreal, Quebec.

Afternoon Session—I P. M.

5. "Goitre Work." (With movie film.)
Dr. Edwin P. Sloan, Bloomington, Illinois.
6. "Physiology and Embryology of Colonic Stasis."
Dr. George Armstrong, Professor of Surgery, Faculty, McGill University, Montreal, Quebec.
7. "The Problems of Intra Cranial Surgery Relating to Brain Tumors."
Dr. Charles H. Frazier, Professor of Neurosurgery, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

Intermission

8. "A Consideration of the Basal Metabolic Rate in Surgical Treatment of Diseases of the Thyroid Gland." (Illustrated.)
Dr. Reginald H. Jackson, Madison, Wisconsin.
9. "Symptoms and Signs of Foreign Bodies in the Bronchi."
Dr. Thomas McCrae, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.
10. "Foreign Bodies in the Air Passages from the Viewpoint of the Roentgenologist."
Dr. Willis F. Manges, Professor of Roentgenology, Jefferson Medical College, Philadelphia, Pa.

Evening Session—7 P. M.

11. "Surgical Aspects of Uterine Malposition."
Dr. Joseph A. Pettit, Professor of Surgery, University of Oregon, School of Medicine, Portland, Oregon.
12. "An Interesting Intestinal Case."
Dr. George W. Koch, Sioux City, Iowa.
13. "The Program of the American College of Surgeons."
Dr. Franklin Martin, Chicago, Illinois.
14. "Non-tuberculous Pulmonary Infections."
Dr. John H. Peck, Des Moines, Iowa.
15. "A Critical Study of an Organism Associated with a Transplantable Carcinoma of the White Mouse."
Dr. John W. Nuzum, Chicago, Illinois.

SMOKER

Fourth Day—Thursday, November 17, 1921—7 A. M.

1. Diagnostic Clinic (Medical).
Dr. Thomas McCrae, Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.
2. Diagnostic Clinic (Surgical).
Dr. William J. Mayo, Mayo Clinic, Rochester, Minnesota.

Intermission

3. Diagnostic Clinic (Medical).
Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard University, School of Medicine, Boston, Mass.
4. Diagnostic Clinic (Surgical).
Professor H. C. Jacobaeus, Serafiner Hospital, Stockholm, Sweden.

Afternoon Session—1 P. M.

5. "Role of Ovary in Pelvic Surgery."
Dr. William P. Graves, Professor of Gynecology, Harvard University, School of Medicine, Boston, Mass.
6. "Variations in Abdominal Viscera as Found in the Anatomical Laboratory of the State University of Iowa."
Dr. Henry J. Prentiss, Iowa City, Iowa.
7. "The Surgical Aspects of Diverticulitis of the Colon." (Lantern slides.)
Dr. William J. Mayo, Mayo Clinic, Rochester, Minnesota.
Dr. George W. Crile, Cleveland, Ohio. Subject to be announced.

Intermission

8. "A Treatment for Chronic Malign Diseases of the Superficial Lymph Glands."
Dr. J. L. Yates, Milwaukee, Wisconsin.
 - (a) Laboratory Aspect: Dr. C. H. Bunting, Madison, Wis.
 - (b) Surgical Aspect: Dr. W. J. Mayo, Rochester, Minn.
 - (c) Medical Aspect: Dr. Frederick Tice, Chicago, Ill.
 - (d) Roentgenological Aspect: Dr. Otto H. Foerster, Milwaukee, Wis.

9. "The Relation that Exists Between Hypertension, Myocarditis and Nephritis."
Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard University, School of Medicine, Boston, Mass.
10. "The Thoracoscopy and Its Practical Use."
Professor H. C. Jacobaeus, Serafiner Hospital, Stockholm, Sweden.

*Banquet—Thursday, November 17—7 P. M.**Addresses*

Eminent members of the profession who are guests of the Association.

Distinguished citizens of the United States.

Presidents of state societies.

Notes

Dr. John G. Clark, Professor of Gynecology, University of Pennsylvania, School of Medicine, Philadelphia, Pa., has accepted a place on the program on condition that he return from the Orient in time for the assembly. Dr. Clark has sent in the subject of his address as follows: "The Use of Radium in Gynecology," also "The Anatomic Principles Underlying Plastic Operations." (Illustrated with lantern slides and clay modeling.)

Professor De Quervain of Berne, Switzerland, is expected as one of the foreign guests at the Assembly.

All physicians who are in good standing in their state societies are urged to attend the Assembly. Bring your ladies and come and stay throughout the meeting. The Milwaukee physicians are preparing to give the doctors a hearty welcome.

(Signed)

GEORGE V. I. BROWN, Milwaukee, Wis.,

President.

WILLIAM B. PECK, Freeport, Ill.,

Managing Director.

DOMER G. SMITH, Freeport, Ill.,

Secretary.

DR. HORACE M. BROWN, Milwaukee, Wis.,

DR. TOM B. THROCKMORTON, Des Moines, Iowa,

DR. DON DEAL, Springfield, Ill.,

Program Committee.

THE VANISHING GENERAL PRACTITIONER

If the tendency toward excessive specialization which Dr. Angus McLean finds in the medical profession were a phenomenon peculiar to it, successful prescription would be more easy than it is. But this tendency is only one manifestation of a practically universal trend in America. Today even the day laborer specializes if he has a chance to do so. The all around workman is becoming as rare as the family physician whose passing Dr. McLean justly mourns. Musicians, business men, lawyers, artists, actors, scientists, more and more are branching from the main highway into narrow paths. There are specialists even in religion.

Dr. McLean thinks that a large determinative influence in thinning the ranks of the general practitioners is the question of remuneration. As

the doctor puts it, the family physician has become merely a "bird dog" for the specialist who gets the fat fees, and the medical student of the future will "seek to attain the maximum financial reward." Undoubtedly this is true in many cases. Physicians are only human beings, and it is not be wondered at that they follow the example set them by the remainder of the members of their race.

Yet we are unwilling and unable to believe that the desertion of the field of family doctoring is wholly or even chiefly due to desire for money, because we know a great many physicians who are anything but sordid, and who are self-sacrificing and an honor to their profession. Some of these are specialists who have become such, not in order to grow rich, but because they have felt themselves peculiarly fitted to work expertly in a particular field. It is an exceedingly good thing for humanity that they have felt this way. To the researches of specialists are due most of the biggest advances in medical science; and because of these advances thousands of people walk the streets in health who otherwise would be invalids or in their graves.

We cannot get away from the conviction that the larger reason for relative desertion of the field of general practice is the growing wideness of that field and the correspondingly sharp realization among medical students that a thorough knowledge of all branches of modern medicine is practically unobtainable. Under such circumstances the average youth decides against a career which he fears will make him a jack of all branches and a guild master of none, so he lays his plans to specialize. Perhaps the only way to overcome the excessive swing toward specializing is to evolve in some way a specialization in general practice.—*Journal Michigan S. M. S.*

CHIROPRACTORS' CAMPAIGN IN MICHIGAN

The chiropractors of Michigan recently held a meeting in Jackson. The alleged "father" and "high-priest" of the cult, from Davenport was present and is reported to have delivered an address on "selling yourself." The following are extracts of newspaper reports of the meeting:

"Give me the public press and the power of public opinion and you may write as many laws as you please upon the statute books."

"Launching of a public campaign in Michigan will bring the malice of the organized medical profession against you and that some of you may be arrested and jailed as was done in California. But, why should you or I fear arrest and jail if it is for a principle? Serious times are before us and the next five years will be the worst."—We may expect a chiropractic MacSwinney to rise up and attempt a hunger act.

A sum of \$2,500. was pledged for publicity with the National organization pledging a like amount.

The "Fountain Head" has still to learn that Michigan will cause their next five years to be filled with plenty of grief.

—*Journal Michigan S. M. S.*

HENRY FORD COMES OUT AGAINST STATE MEDICINE.

The following editorial is from the *Dearborn Independent*:

State ownership and control is perfectly sound in theory, and has proved itself wholly unsound in practice. There may be countries in the world where it is safe to trust the control of vital interests to the group of men who comprise the government; it has not always been safe in this country, as years of experience prove. The revelations of official incompetency, and not so much incompetency as dishonesty, during the recent war period, will effectually modify any theoretical appeal which the idea of state control may have.

But that there are influences in this country which are bent on bringing all the people's affairs under official scrutiny, is most apparent from the efforts now being made to create a sentiment in favor of "state medicine." This means simply: more jobs, no privacy, curtailment of freedom, the destruction of the medical profession by the discouragement of research work, and the coarsening of delicate intimacies. It means practically that what the United States Shipping Board did to the shipping situation of the country, "state medicine" would be permitted to do to the people's health.

The most astonishing feature of this propaganda is the assumption that the proposal could be made attractive to the American people. Most cities have city physicians now, and most counties have county physicians, and no one rests under any doubt of the quality of the services rendered. The public has had a wide experience in going to its officials for sufficient water, heat, light, school facilities, transportation service, and sufficient difficulty in getting any kind of service at all at any reasonable tax rate, to prevent its falling in love with the idea of going to its officials for medicine when it is sick. Practically, it will not work; the genius of the American people is against it.

Between family physicians and families there is a confidential relation which rests on choice and experience. It is not official. It is not altogether professional. It partakes of the confessional in large degree, and constitutes a friendly past based on the experience of many fights with disease and death. So well recognized is this that the family physician has become a fixed figure in our lives, and with results of undoubted good, as the records generally show.

To change all this and establish a police health station, as it were, at which citizens must apply for medical aid and await the pleasure of an official doctor who is paid anyway and whose professional career does not depend on the confidence he is able to evoke by skilled and loyal service, is to suggest something which is so alien to our Americanism as almost to prove an alien course and an alien purpose.

With the growing predilection of a certain group

for medicine and surgery, and with that group's constant predilection for securing control of the intimate sources of the people's confidence and strength, there is no doubt whatever as to what complexion "state medicine" would take if it were adopted.

These are times when more than at any previous period the American people must be on guard against ideas that are not American. The time has come for the exercise of a wholesome defensive suspicion about many things that outwardly are made to appear desirable, but inwardly conceal dangers to our fundamental traditions and liberty. And we are never more justified in our suspicions of alien influences for an alien purpose than when we see attempts made to "regiment" the American people or their private affairs.

NOTE:—Henry Ford's experience with the Peace Ship no doubt gave him a very clear insight into the mercenary motives behind uplift and uplifters. We are quite reliably informed that he has cut off all appropriations for professional uplifters. It is about time that the business men of this country get awake to a realization that the advocates of state medicine and allied soviet government schemes are the same pirate crew that were advocating un-American attitude in the late war. The recent report of the Lusk commission specifically condemns several men and women whose names are found on the letterhead of the A. A. L. L.

WHY NOT MAKE THE PRESCRIBING OF ALL DRUGS UNLAWFUL?

The bill to prohibit physicians from prescribing beer for medicinal purposes is one of the most offensive pieces of tyranny in our history. Whether it is the tyranny of a majority, which we doubt, or of an organized minority bullying the timidity of politicians, which we believe, it should be protested vigorously as inconsistent with American principles and the fanatical perversion of a reform.

There are any number of deadly poisons in the materia medica used legitimately for alleviating pain or for some other therapeutic purpose. Morphine, chloral, strychnine, arsenic, cocaine, many coal tar products, are in familiar use in many forms. But they are also abused by addicts, as is well known, and the agencies of the law are not able to prevent this evil any more than they are able to prevent murder and robbery.

Why not, therefore, make the prescribing of all these drugs unlawful and prohibit their manufacture or importation?

That would be analogous to the prohibition of the prescription of beer for medicinal purposes. There are morphine and cocaine addicts. To protect them and prevent the abuse of these drugs, why not deprive all those who need them of their benefit? Because there are doctors and druggists who carry on an illicit traffic in habit making drugs, why not prohibit all doctors from giving their patients the benefit of such drugs in proper circumstances?

The medicinal prescription of beer might be abused by a small minority, always under the fear of exposure and prosecution. It is because of this minority that the normal and law abiding must be deprived of a legitimate use. This is an illustration of the perverted viewpoint of the extremist prohibitionist and his abettor, the professional moralist agitator. Our American instinct as freemen, our American common sense should revolt against such perversion of right policy, and those who recognize the good achieved by the abolition of the saloon and the workings of prohibition in its general application should be the first to resist the excessive proposals of extremists. Intemperance in temperance laws deserves and will receive rebuke. The reaction against such a measure as the medicinal beer law will be a good deal worse for the cause of temperance than any abuse of the right of prescribing beer could be.—*Chicago Journal*.

GRANDMOTHER WAS RIGHT

YOU MUST EAT A PECK OF DIRT ACCORDING TO THE
LAY HEALTH COMMISSIONER OF DETROIT

Little Harold came in from play, a dark ring surrounding his mouth, his face, hands and clothing the color of the soil. Mother gasped and proceeded to lay Harold out for playing in the dirt and risking the dangers of contamination. Grandmother, sitting placidly in her corner, interposed, "Don't worry," she said, "we all have got to eat a peck of dirt before we die."

We may have thought grandmother's remark was a back country jocularity, a way of getting amiably round the eternal affinity of boy and dirt, but now comes Health Commissioner Henry F. Vaughan to lend a degree of scientific authority to grandmother's aphorism.

"If you eat too much dirt you will die; if you eat a medium amount of dirt you will live long; if you don't eat enough dirt you will die," sagely announces the commissioner. Though he neglects to specify for an eager humanity the quantity of dirt which may be said to be a "medium amount" we are not troubled. Grandmother said a peck was the measure.

Mr. Vaughan finds a basis for his pronouncement in the health report of army camps which showed, he says, that city men had lower death rates than those from the country. City men eat more dirt, are constantly absorbing it, and germs, too, and the dirt sets up a ferment in the body that dissolves the germs, he reasons.

So, there we have a plain and simple rule of health. Eat dirt in moderate quantities. Don't stop at a quart or reach out for a half bushel. Eat a peck, but don't finishing eating it until you are ready to pass to another world. That's grandmother's formula and Mr. Vaughan backs it up, so it must be right.

Note: Publicity at any cost but this may prove the utter folly of all propaganda.

LOOKS LIKE THE SOUTH IS AWAKENING TO THE FALSE HEALTH PROPAGANDA MENACE

PELLAGRA AND THE SOUTH

To the Editor: The recent pellagra scare, which was not justified by the facts, does the South a gross injustice. The probable cause of this misrepresentation of the South is the enthusiasm of Dr. Goldberger, an officer in the United States Public Health Service, who is obsessed with the idea that a diet of "corn bread, syrup and bacon" is the sole cause of pellagra.

Dr. Goldberger reasoned that with the low price of cotton the people of the South would have to exist on this diet, and therefore there must be an increase of pellagra. He evidently does not know that the farmers of the South have raised more food crops than before the war.

The majority of physicians who have had most experience with the disease do not accept Dr. Goldberger's theory. It is undoubtedly true that the poorly nourished individual is susceptible to pellagra just as he is to tuberculosis, and that an unbalanced diet is a predisposing cause of the disease—as it is to many other diseases—but most of us feel that the cause of pellagra is an infection of some kind yet to be discovered.

We are sure that your sense of fairness will impel you to present to your readers the facts regarding health conditions in a region of the country that has suffered much from the reputation of being unhealthful. We ask you to present the South's side of the pellagra question.

SEALE HARRIS,

Secretary-Editor, Southern Medical Association,
Birmingham, Ala.

PHYSICIANS MAY SUE AT COMMON LAW EMPLOYER AND EMPLOYEE AGREEMENT CANNOT FIX PHYSICIANS' COMPENSATION

In an action by a physician to recover the reasonable value of professional services he rendered at the request of the defendant company's superintendent to several of its employees, who were injured in the course of their employment, the defendant contended that under the Workmen's Compensation Law the plaintiff's exclusive remedy to recover the money value of his services was by application to the Industrial Commission, upon whom the law imposed the duty of fixing the plaintiff's fees. There was no dispute as to the rendition of the services, nor as to their reasonable value. The Compensation Law requires that an injured employee be given necessary medical services when injured in the course of his employment. That duty primarily falls upon the employer. If he refuses the employee's request for such aid or neglects to furnish the proper service, the employee may select his own physician. Manifestly, therefore, it was held, the defendant here was legally obligated to furnish the

services to its injured employees for the value of which the plaintiff sought to recover. Could the plaintiff enforce his claim by an action at common law, or is he by statute law restricted to an application before the Industrial Commission for the fixation of his fees? The court found no authorities on the point, and was cited to none. It was held that the sentence in Section 13, providing that, "All fees and other charges for such treatment and services shall be subject to regulation by the commission as provided in Section 24 of this chapter, and shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living," has reference only to fees and charges incurred by the workmen for medical treatment where the employer refuses or neglects to provide such treatment. Section 24 provides for the approval of the value of the services by the commission and the inclusion of the charge as part of the award, showing that it is the charge incurred by the employee, and not the employer, that is subject to regulation by the commission. "No attempt to regulate private arrangements entered into between the employer and the physician he might select is either expressly made or by implication to be spelled out of its provisions, and wisely so, for in no way could that be a matter of public concern. Nor is there any plan or schedule set forth for enforcement thereof. Recourse to a court of law therefore follows as the sole remedy, in the absence of a proper, expressed and comprehensive provision for enforcement under the act. It is clear, therefore, that where the physician's claim is based solely on an agreement with the employer, and is not a part of the injured workman's claim for compensation, the compensation commission is without legal authority to fix the fee and enforce it, and the physician still retains his right to prosecute his claim in a common law action." Judgment for the plaintiff was therefore affirmed.—*Feldstein v. Buick Motor Company*, 187 N. Y. Supp. 417.

THE NEW YORK DRUG LAW MUDDLE

To the Editor of the Medical Record.

Sir:—My attention has been called to your editorial, "The Drug Law Muddle," in your issue of April 16. If the term Drug Law Muddle was apt at the time your editorial went to press it would be infinitely more apt now for the reason that we have three distinctly conflicting bills presented to the Governor by the Legislature for his deliberation. *The muddle, therefore, is one not alone to tax the minds of those interested in the solution of the drug problem from the sociological and medical standpoints, but calls for action so that the entire situation may be placed before the Governor and the right thing done by him in the signing of any of the three bills.*

I am prompted to write you so as to set myself

straight, or rather you straight on the subject treated in your editorial. First, you suggest that the Magistrates' Association was in part responsible for the present "unsatisfactory law." There have been no indications that the existing law has been in itself unsatisfactory. The "muddle" that you speak of is not due to failure of the statute but to the enforcement of promulgated rules and regulations which were in some instances in their effect tantamount to repeal of the law and contrary to its intents and purposes.

The complaints and protests as I have heard them on the part of the medical profession have been to the rules and regulations and administrative restrictions made by Federal and State officers in their enforcement of the laws, which had the effect of frightening and discouraging the legitimate practice of medicine in these cases and reviving peddling and its associated criminal cases coming into court. This I pointed out in my report.

It is to be appreciated that the Harrison Law is a Federal tax law, although aiming to control traffic in drugs. The Supreme Court has decided that police power cannot be exercised under this statute for the reason that the Federal Government is without such power. This is the reason why mere possession without the showing of some definite other violation in the obtaining of the drug was held not to be a crime.

If there were no state law, peddlers and possessors in the underworld would be practically free from molestation in so far as possession is concerned. You can visualize the evils that would result and appreciate that such a condition would arise as would give rise to far more drastic legislation in the future if our whole state law were repealed. In fact the situation might immediately result in a sanitary code form of enactment and lead to a state of affairs that the word "muddle" would be no name for.

It would undoubtedly happen in some large centers that the sanitary code would provide just exactly what the Fearon-Smith Bill provides, which you in your editorial term "monstrous," and would utterly forbid a medical practitioner in private practice prescribing a drug for drug addicts, or make such prescribing practically impossible. This would undoubtedly lead to chaos. I call your attention to the arguments used by me in my report on this matter.

I am impelled, therefore, to push the thought that you expressed that it might be well to adopt the bill recommended in my report, namely, the second Smith-Lord Bill. It abolishes the Commission and leaves the law for the State of New York without the power to permit any further obnoxious administrative restrictions or regulations by administrative officers, but otherwise retains a substantial State law which is the least burdensome to the medical and pharmaceutical professions of any State law in the Union, while at the same time it answers all sociological purposes.

In passing let me suggest to you that the regulations promulgated and imposed were no part of the statute or substantive law. I believe that if practitioners of medicine or pharmacy or their organizations had availed themselves of their legal rights under the law, many of the most obnoxious regulations and rulings would have been upset.

The great importance of this whole situation at this time cannot be too strongly called to the attention of the medical profession, the drug trade and the sociologists. This is my excuse for the lengthy communication to you, in the realization that you will appreciate its importance and will act in your earliest issue so as to properly line up the forces before the Governor.

CORNELIUS F. COLLINS,

Chairman, Committee on Narcotic Drug Control,
State Association of Magistrates.
New York, April 17, 1921.

THE MEDICAL RECORD COMMENT ON THE MUDDLE

We would call special attention to a communication in this issue from Judge Cornelius F. Collins, Justice of the Court of Special Sessions and for years Chairman of the Committee on Narcotics of the Magistrates' Association of this State. As penned by a leading authority on narcotic law in this State, and one of the best informed men on the subject generally, his letter is especially valuable at this time and throws important light upon the real drug muddle, which seems to be even more a muddle of administration than one of law. Apparently what we have needed and still need is not so much more laws (save the mark!) or radically different laws as the wise and honest enforcement of the meaning and intent of the laws that we have.

We have apparently not been following the law at all, but have been governed by arbitrary administrative opinions, and have been forced to observe certain rules and regulations which were not contemplated in the law itself and which, as Judge Collins points out, even acted in some instances practically to repeal the law. In other words, it seems that we have been governed, or allowed ourselves to be governed, by administrative opinion written into arbitrary rules and regulations, and not at all by real administration of the actual law which was designed to have an entirely different effect.

It is in tardy but growing appreciation of these facts that medical men are endorsing the Second Lord Bill, which retains the essential law as worked out from experience and legislative investigation and study, but which abolishes the *Narcotic Commission* through which most of these difficulties and uncertainties have arisen, and nullifies the regulations and interpretations exercised by it which have worked out so harmfully.

It is in the hope and expectation of restoring normal interpretation and the exercise of common sense that the Second Lord Bill is supported and urged upon the Governor for his signature. It is

also in growing appreciation of the real causes of the present situation, with its recognized increase of criminal underworld smuggling and drug traffic and its driving of honest medical men away from their duties in the study and care of the deserving and innocent addicted sick, that there is such general opposition to the indefensible Fearon-Smith Bill. Its fallacies and menaces were so clearly shown in open hearing last year, when it appeared as the Cotillo-Smith Bill, that it was actually withdrawn by its introducer, Senator Cotillo. The viciousness of the present bill was demonstrated by a mass of reliable evidence at the hearing on March 6, and one cannot doubt that the Governor, after a study of facts of the situation brought out at this hearing, will refuse to sign any such measure. There are too many authoritative, disinterested and informed persons—lawyers, physicians and social workers—unalterably opposed to it in the interests of public welfare, of medical science, and the prevention and suppression of criminal traffic in narcotics to permit of entertaining the thought that Governor Miller could, if at all informed of all the facts, possibly consider the Fearon-Smith Bill.

The only sane and reasonable solution of the problem is to enact the Second Lord Bill, if only as interim legislation, and then immediately to enter upon a thorough investigation and study of the scientific and other needs of the situation. The concluding paragraph of the report of the Public Health Committee of the Academy of Medicine is to the point. In this it was stated that the whole question of drug addiction needed a dispassionate thoroughgoing consideration in its various aspects on the part of the medical profession.

Note: We make the following comment on the whole addict situation.

This letter of Judge Collins is very important and goes to the real bottom of the trouble. *"I believe that if the practitioners of medicine and pharmacy or their organizations had availed themselves of their legal rights under the law, many of the most obnoxious rulings and regulations would have been upset."*

Again he says: *"The 'muddle' that you speak of is not due to failure of the statute, but to the enforcement of promulgated rules and regulations which were in some instances in their effect tantamount to repeal of the law and contrary to its intents and purposes."*

Also he speaks of *"rules and regulations and administrative restrictions made by Federal and State officers in their enforcement of the laws, which had the effect of frightening and discouraging the legitimate practice of medicine in these cases and of reviving peddling and its associated criminal cases."*

Again he writes: *"The regulations promulgated and imposed were no part of the statute or substantive law."*

The editorial on this letter of Judge Collins I am also enclosing. It is well worth knowing about.

The letter and the editorial seem to me to point out to medical men and organizations the trouble with things and the remedy.

In a word, the interpretation and administration of laws has been illegal.

Those governed by laws have their rights under those laws and proper remedy for illegal administration of them, and perverted or manipulated interpretation.

Administrators are just as much legally bound to show honesty and "good faith" as anybody else, and we have legal means of demanding it of them. If they act upon representations or statements presented to them by particular groups or cliques or anything else, they are legally responsible for acts resulting from such information or representations, if they have not tried or have for any reason neglected to consider other material bearing upon their interpretations and administrative acts, or if they have interpreted and acted in defiance of reliable preponderance of available information.

Judge Collins points out that medical organizations have their legal rights in such situations. Our society made a year ago a reasonable request for honest and fair interpretation and administration of narcotic laws. Failing in obtaining recognition to a reasonable request, we still have left the avenues of legal demand for recognition of our rights against the unjust action and reactions of laws interpreted and administered and applied in such a way that their administration is "tantamount to repeal of the law and contrary to its intents and purposes," as Judge Collins puts it, and as there is ample evidence and record and material to support.

The present attempted interpretations and so forth are based somewhat beyond any doubt upon representations and statements and opinions and conclusions coming from people like Dr. E. Elliot Harris, S. Dana Hubbard, Alfred C. Prentice, the lawyer Arthur C. Greenfield, etc., and also somewhat from statistics and statements and deductions coming from the New York City Board of Health.

Their reliability and validity must therefore depend upon the qualifications of these people as compared with the bulk of recorded workers and men of real experience. We believe that without any question at all their reports and statements and conclusions would be utterly overthrown and discredited by comparison with the bulk of reliable record and report and experience and scientific information.

We have been told that if there were no other grounds for legal action, that the easily traceable effects of these interpretations and applications upon increased smuggling and peddling and public health and welfare, would be grounds for what they call a taxpayer's injunction or something like that in defense of the common public policy and public welfare.

These things are easily shown and are matters

of official record and testimony and plentiful discussion in reliable print.

So that a medical organization has at least two grounds of protection against administrative and interpretative illegality and action—

1. Such interpretation is based upon erroneous premise and information and presentation.

2. Such interpretation is against public health, public welfare and public policy.

If the issue can be forced into consideration by present administrative or executive heads it would end the whole rotten business. The present administrators do not have to wash the dirty linen of their predecessors, not to stand for their negligence or mistakes nor allow themselves to be subjected to partisan influences, to the exclusion of the preponderance of reliable testimony and record.

The absolute reversal of interpretation and administrative policies and so forth of the last two years are now more and more matters of open record. The fallacies of the interpretations of present and recent attempt have been pretty thoroughly exposed in the efforts to pass the Cotillo and Fearon-Smith Bills in New York State, which they seem to closely follow as stated in the report of the Legislative Committee from the New York State Society.

It is almost inconceivable that honest officials would refuse to listen to reasonable requests for honest and competent interpretation. The present interpretations have had nearly two years of trial under administrative regulations and rules and various machinery. Their results are patent and obvious in the present situation. The sources of such interpretation are now fairly openly known.

It seems to us that there is ample of record and testimony and so forth to ask for review of interpretations and regulations, etc., and for establishing of honest and competent interpretation. If it is not to be had for the asking, Judge Collins' letter shows that it may be forced by legal measures to secure legal rights and protect and defend professional principles and public welfare and policy.

The whole thing boils down to the fact that it seems as though the New York doctors have been illegally governed, and did not have to permit themselves to be. Of course their protection against such things properly laid in the special committees and officials of their medical organizations. Some of them, however, seem to have been more interested in bringing about the present attempted interpretations and in trying to get the Cotillo and Fearon-Smith Bills passed.

There is so much and growing crookedness and criminality and evil in this situation that it almost seems as if there might be a return to the conditions of a year and a half or two years ago, when the interpretations and administrations as a general rule were the result of experience instead of "formularization" and unscientific and futile definitions coming from such people as are described in the

report from the New York State Society.

It seems as if there might be a return to trying to prevent and control the actual evils and criminalities and a little less concentration against honest effort to help and remedy.

REPORT ON HABIT FORMING DRUGS BY COMMITTEE OF AMERICAN PUBLIC HEALTH ASSOCIATION*

In the following report, your Committee has confined itself to the consideration of certain so-called "habit-forming" drugs only, for the reason that these drugs present a peculiar problem of the utmost importance and one quite distinct from that of other drugs commonly classed as "habit-forming." The drugs selected are the true narcotic or opiate drugs, *i. e.*, opium and its derivatives, to the exclusion of cocaine, alcohol and the various coal-tar drugs which are commonly habitually used, but which clinical study and laboratory experimentation fail to show possess sufficient physical or other similarity in their fundamental characteristics to warrant their further grouping with the opiates as of one class under "habit-forming" drugs.

It is necessary that the matter of terms and definitions should be cleared up and established on a basis of physical and scientific fact, if those who frame and administer restrictive laws and those who make judicial decisions shall act with intelligent understanding.

Thus the term "narcotic addict" has never yet been given an authoritative definition upon the basis of known facts of his condition and the "practice of medicine" upon those afflicted with narcotic addiction-disease, as the condition must now unquestionably be called, has never been so defined as to determine its legitimate procedure upon disease facts.

Your Committee, therefore, would offer for your consideration the following basic definition to apply to those who suffer from narcotic, *i. e.*, opium addiction.

Narcotic drug addiction is a physical condition in which continued administration of narcotic drugs—from whatever cause or origin and in whatever type or class of individuals—has set up within the body a mechanism of protection against the toxic action of narcotic drugs. This mechanism of protection constitutes the mechanism of addiction-disease. A narcotic drug addict is an individual in whose body the continued administration of opiate drugs has established a physical reaction, or condition, or mechanism, or process which manifests itself in the production of definite and constant symptoms and signs and peculiar and characteristic phenomena, appearing inevitably upon the deprivation or material lessening in amount of the narcotic drug, and capable of immediate and complete con-

*Presented to the Section of Food and Drugs, American Public Health Association, at New Orleans, La., October 27-30, 1919.

trol only by further administration of the drug of the patient's addiction. In general the symptoms, signs and phenomena consist of a sense of restlessness and depression followed by yawning, sneezing, excessive mucus secretion, sweating, nausea, uncontrolled vomiting and purging, twitching and jerking, intense cramps and pains, abdominal distress, marked circulatory and cardiac insufficiency and irregularity, pulse going from extremes of slowness to extremes of rapidity, with loss of tone, faces drawn and haggard, pallor deepening to grey-ness, exhaustion, collapse and, in some cases death. A definition along no other lines will include all who suffer from narcotic drug addiction. This symptomatology and the mechanism or process which produces it are the only common and characteristic attributes and possession of all narcotic addicts.

We would emphasize the fact that cocaine, alcohol and other drugs of indulgence do not fall into this definition, and they and their problems of handling, treatment and control, are quite different and distinct from the matter of opiate addiction-disease.

The matter of "legitimate professional practice," as applied to medical procedures directed at those suffering with narcotic addiction-disease, has never been satisfactorily outlined. The reason for this is doubtless because the facts of this disease and the clinical reactions of narcotic addiction are not sufficiently known in the courts and elsewhere, to give a basis for the determination of legitimacy of practice on the same intelligent lines of application of medical and scientific knowledge, as are applied to the question of legitimate practice in the cases of other diseases.

We feel that this should be determined upon the basis of honesty of application of clinical and scientific facts, along with a reasonable familiarity with the disease rather than upon various ideas originating in the minds of lawyers, police officials, reformers, promoters of cures or others interested in technicalities of profit rather than in scientific medicine and public health.

It is necessary to clear up and establish medical facts and from them to reasonably interpret the law, both for the protection of the honest and innocent and for the more efficient punishment of the dishonest and criminal.

Measures to restrict or control the use of narcotic drugs by purely forcible means have, in every instance, so far as your Committee can ascertain, failed of their purpose, and furthermore, where restrictive measures have been drastic or rigidly enforced, the illegitimate traffic in narcotics has for obvious reasons increased. Thus in spite of the enforcement during the past four years of the Harrison Act, the Committee appointed by the Secretary of the Treasury to investigate the extent of traffic in these drugs, reports that the underground supply equals that coming through legitimate channels.

Reasons for this universal failure are found in the neglect of the clinical and other scientific aspects of the subject, with failure to disseminate authoritative and useful information, and also the tendency to emphasize in a spectacular manner in the daily press, periodicals, and elsewhere, the old theories to the effect that the continued use of narcotic drugs is a vicious habit or an evidence of a neurosis or degeneracy, thus perpetuating the almost universal condemnation that has attended the addict. The same over-publicity has been accorded the occasional medical offender and has led to neglect to recognize and encourage the efforts of the conscientious majority of physicians.

The administration of laws and regulations of a too restrictive character, as applied to physicians and druggists as a whole, has apparently resulted in the neglect of this disease by the medical profession and the consequent retarding of the solution of the problem, just as they would if thrown around the treatment of any other disease. The demands of various minor technicalities and the possibilities of unintentional violations render so hazardous the practice of medicine as applied to these cases as to drive away from help to the addict the average honest practitioner of medicine, while they encourage the shyster and charlatan as they do underworld commerce.

Compulsory registration of all narcotic drug addicts with photographs and other identification data as heretofore tried and in present execution, has failed as yet to demonstrate its usefulness. It has likewise failed to accomplish the registration of a great majority of those afflicted with this disease, who apparently prefer the chances of illegitimate narcotic supply to possible revelation of their condition with its social, personal and economic menace.

It seems to be the fact that such addicts as may be said to be a menace to society find their supply in the underworld and hence do not register while those whose lives are an economic asset to the community do not dare to register through possible jeopardy to themselves and reputations. Compulsory registration in its present status as described above and as resulting from past and present experiment and experience, appears to your Committee to serve no practical purpose either from the point of view of the sufferer or of the public.

It would further appear that regulatory and restrictive administrative measures should be framed and executed only upon the advice of practitioners of medicine conversant with the subject and, so administered as not to interfere with the honest practice of medicine and the welfare of the honest narcotic addict.

Your Committee would also condemn enforced hospitalization for all addicts as an unsuccessful procedure at the present time, due, apparently, to lack of intelligent medical and nursing handling of these patients. Ample testimony before the Whitney Committee of the New York Legislature

justifies this conclusion. The Report of the above-mentioned Committee states:

"Evidence offered by physicians shows that many addicts have died under the methods of treatment existing today and that a large percentage of those discharged from institutions as 'cured' are driven back to the use of narcotics through unbearable physical torture induced by improper withdrawal of their drug." Evidence of this nature was adduced as applying to both public and private institutions in New York State.

Success in hospitalization is to be expected only under the same conditions as attend success in private practice, namely, medical and nursing competency and skill.

Your Committee believes there is no more reason to require narcotic drug-disease sufferers to undergo unusual and potentially harmful procedures in the name of "treatment" and "cure" of their condition than there is those who suffer from other diseases. The innocent contractor of addiction-disease should have the same rights of selection of treatment and of personal choice and the same protections from ignorance and other medical and institutional shortcomings as have other patients.

Vicious, degenerate and criminal types of addicts should be handled on a basis of vice, degeneracy or criminality and treated for their addiction-disease in places suitable to their personal and class characteristics.

Your Committee believes that one of the greatest present needs is for experimental and clinical research and the education of the profession and laity through all possible channels. Such activity will, your Committee feels, prove the most important factor in the solution of the situation which should be through medical and public health channels rather than through police measures.

Such is the present trend of development now rapidly coming to pass and this Section and the American Public Health Association as a whole should take a prominent part in the movement and through its influence and publications assist in all appropriate ways.

In this connection your Committee would emphasize the fact that there is no specific or routine treatment for narcotic addiction-disease and both the public and profession should be warned to regard with suspicion any promulgation of so-called "cures" and of special routine treatments. The tendency to exclude these patients from hospitals other than custodial and correctional constitutes a serious loss of clinical material for study and teaching to physicians and nurses and should be combated.

The Committee also feels that in proportion as the medical and nursing professions become more familiar with this disease in its modern conception and clinical manifestations, the need for enforced restraint in special institutions or elsewhere will become less and finally will only be required for

such cases of addiction-disease as are fundamentally in need of restraint because of inherent defect in their mental or moral make-up.

That improvement is needed in the methods of instructing medical men in the care and treatment of narcotic addiction-disease is evidenced by the replies received to a questionnaire relating to the subject, recently sent to the medical schools of the country, by a member of your Committee. Of the 85 institutions queried, 37 or 43 per cent replied. Among these replies, were included the leading schools of this country. A brief review of the data so obtained indicates that the time devoted to the physiological, clinical and therapeutic consideration of opiate drug addiction averaged about two hours, and that in several institutions the subject was not considered at all. In 25 of these schools, the subject was taken up only under materia medica or therapeutics in the second year's course and, in nine schools, under the consideration of nervous and mental diseases. Clinical material was woefully lacking, none at all being available in 13 of these schools, while in the others the replies stated that opportunities to observe cases were "rare," "infrequent," or limited to an occasional case seen in the insane asylums or jails.

The textbooks used were, with but one exception, those which teach the old "habit" and "vice" theories, and in which treatment is confined to routine procedures and "specific" formulas. None of the more recent experimental or clinical work was mentioned.

While realizing fully the possible social dangers of narcotic addiction-disease, your Committee distinctly deprecates the sensational manner in which the statistics of this disease have been handled by the lay press and uninformed or notoriety-seeking officials in the emphasis which is laid on the number of addicts said to exist in the United States. By reliable method of computing the number of addicts existing, these numbers have been determined, by some civilian investigators, as being a mere fraction of the numbers alleged by the extreme sensationalists; and it is very significant that the estimates of civilian observers have been strikingly borne out by the experience of the Division of Neurology and Psychiatry of the Office of the Surgeon General of the Army during the late war. It is obvious that such exaggerations inflame the public imagination and tend to produce that atmosphere of fear and apprehension which is so potent a deterrent of intelligent and scientific consideration and action.

Your Committee would not be understood as opposing the restriction of the use of narcotic drugs, but it feels that the principal effort of such restrictions should be directed at traffickers, the underworld, and criminal commerce, medical charlatans and incompetents and in general such as have to do with the needless dissemination of this disease, while greater consideration should be accorded the true disease nature of narcotic drug addiction, to-

gether with encouragement and coöperation for the honest practitioner and the honest addict with the protection of the latter's physical, social and economic welfare and rights.

A partial bibliography covering some of the more useful contributions to the subject is attached to this report, and it is suggested that the frequent publication in the Association's Journal, of short articles, abstracts or reviews, such as might be prepared by some suitable board or committee, would assist materially in stimulating in proper quarters interest in the more modern views and teachings on this important subject.

Respectfully submitted,

C. E. TERRY, M. D., *Chairman*,
OSCAR DOWLING, M. D.,
LUCIUS P. BROWN,
ERNEST S. BISHOP, M. D.

Herman C. Lythgoe dissents from most of the opinions expressed in this report.

Note: The material in the report of Dr. Terry's committee about two years ago seems to have been fully proven by the subsequent events and developments. It is a good report, about the only report from scientific committee sources which goes to the real issues of the situation. It and the report of the Legislative Committee of New York State Medical Society are worth while looking over. They contain the real issues of the situation.—*American Journal of Public Health*.

BEING DOCTORED BY CONGRESS

Mr. Wayne B. Wheeler, commander of the camel corps, says there is a "conspiracy" against the antibeer law.

There is opposition to that law, and why not? It is a measure which puts congress into the practice of medicine, which brands every physician as a probable bootlegger, which assumes that beer containing, say, 4 per cent of alcohol is not only more dangerous than distilled liquor containing 60 per cent, but more deadly even than strychnine, digitalis, aconite and the like, which are used as medicines under no restraint save the doctor's training and good sense. A measure of that sort is quite likely to rouse antagonism.

One must admit, too, that there is opposition to the Volstead act as originally passed; and again, there is no particular mystery about the matter. That act declares a beverage which contains 51 hundredths of 1 per cent of alcohol to be intoxicating. Everyone with any knowledge of the subject knows that such a declaration is false. A law that undertakes to state a palpable falsehood must expect to encounter criticism.

If bills now pending at Washington and Springfield pass, congress and the legislature will be engaged in the practice of medicine.

Under these bills, nominally designed to enforce the eighteenth amendment, physicians are allowed

to prescribe distilled liquors in cases of sickness, but not to prescribe beer, ale or wine.

This, of course, is an utter reversal of history, and of the teachings of sociology. Malt liquors and wine, particularly the latter, were classed as medicines long before distilled liquors; and nearly all investigators are agreed that these fiery draughts are the most harmful and dangerous of all alcoholic drinks. But, passing this aspect of the case, how does the common citizen like to be doctored by congress or have his ills treated by the legislature?

Not even in dealing with narcotics have the law-making bodies assumed such powers of interference. Do the champions of bone-dryness really believe that beer is a more deadly drug than morphine, or a glass of wine worse than a sniff of "coke"?

Either alcoholic beverages are so terribly dangerous that none of them should be tolerated, even as emergency medicines, or their medical use should be left to the discretion of medical men. For congress and the legislature to pose as doctors of medicine is as absurd as it is impudent.—*Chicago Journal*.

DECLINE IN THE DEATH RATE

Statistics compiled by the Metropolitan Life Insurance Company show a marked decline in the death rate during the last six months. The rate for the half year is 23 per cent below that for the first half of 1920. The most marked declines are in influenza, pneumonia, tuberculosis, and organic heart disease. The death rate for influenza for the first six months of this year was about one-ninth of that for the first half of 1920; likewise the mortality from pneumonia for the first half of 1921 was about one-half that for the corresponding period of last year. These decreases, together with drops of 19 per cent in the tuberculosis rate and 9 per cent in that for cardiac diseases, are the chief elements responsible for the remarkably low mortality rate. Cerebral hemorrhage and Bright's disease have also registered considerable declines. Measles and whooping cough were slightly lower than for last year.

STATE INSURANCE WILL WEAKEN THE MORAL FIBER OF THE NATION AND SAP ITS PHYSICAL STAMINA

A GERMAN EXPERIMENT

The *Daily News* of Aug. 22 had a timely article on the menace of state care by Dr. William D. Chapman. James W. Gerard has also done a public service in his "Four Years in Germany" by his description of the educational system of imperial Germany, and which points in the same direction as Dr. Chapman's article.

More than one nation in history, defeated in war by another, conquered yet by its civilization. The world has progressed thereby in some instances,

but beware of any universal application of the rule.

"For thirty years," reads a report of an imperial German commission published in 1912, "Germany has had a system of national insurance against sickness and accident. Investigators have recently made a thorough study of its workings and have reached conclusions in regard to it of unexpected interest and importance.

"The investigators find that although cheating is general and notorious, it can neither be prevented nor punished. No social stigma marks the man who is detected in fraud, for the public does not regard it as wrong to rob the government by making false claims for insurance. On the contrary, the offenders openly boast of the success of their scheming and actually deem it an honor to receive government aid, no matter by what means obtained.

"Experienced pensioners give advice to novices in respect to symptoms they wish to assume. They pass around rules for feigning illness and disability as people in other countries exchange prescriptions for obtaining health and strength. The system is robbing the working class of self-respect and ambition and seriously debasing its moral standards.

"But the feigning of illness and accident—ma-lingering, as it is called—is not the worst phase of the situation. The amount of actual sickness has increased. A man easily finds some ground, however slight, for making a claim and his imagination does the rest. The German workman falls ill more easily and stays ill longer than he did before government insurance began. The medical men of Germany have come to recognize as a disease the morbid conviction of the insured that they are entitled to the benefits allowed by law. The prevalence of this condition of the mind, which is wholly owing to psychological causes, is astounding.

"In spite of the great advance in the methods of treating disease in surgical science and hygienic knowledge and in sanitary conditions generally, the length of the illness following any given accident among the classes that benefit from government insurance has increased enormously. For example, among injured persons in Germany the average length of time required to recover from a broken collarbone is more than eight months; formerly in the case of young people it was fifteen to twenty days, and in the case of older persons twenty to forty days.

"The slower cure is not due to fraud. It is due wholly to the patient's mental attitude toward his ailment—to his morbid or hysterical desire to remain an invalid and draw the benefit. So powerful is this desire that the German doctors are able to cure only 9.3 per cent of the nervous diseases that follow accidents, whereas in Denmark, where insurance benefits run for only a limited time, the percentage of cures is 96.3. The difference is almost incredible, but the German investigators, patient and unprejudiced, put forth to prove their

assertions facts and figures beyond the reach of contradiction.

"Naturally enough, the statesmen of Germany are anxious, for they realize that state insurance is not only weakening the moral fiber of the nation, but it is also sapping its physical stamina."

"The tragedy of all reforms," Prof. Bernhard, one of the investigators, pointedly remarks, "lies in this—that the unintended results are more powerful than the intended results."

Paternalism and imperialism go together. We have here a modern, well-thought-out design to prolong the life of a worn-out system of government in which a dominant ruling class lords it over the common people. (Gerard says the German working people were the most exploited people in the world.) This system is a subtle attack on democracy and the end is not yet.

Most of the German ideas adopted, in principle, in this country from the kindergarten (where the children learn to play) all down the line make for a demoralized society, inimical to an independent, self-reliant people.

ARTHUR M. SMITH.

Grand Rapids, Mich.

SAYS PROHIBITION CAUSES ALCOHOLISM

Dr. David R. Clark, head of the Psychopathic Department in Receiving Hospital, Detroit, and senior physician of St. Joseph's Retreat, Dearborn, in the *Detroit Sunday News*, September 18, 1921, says: "Cases of acute alcoholism in Detroit private hospitals have increased twenty per cent since National Prohibition became effective.

"The cases are much more serious than they used to be and there are a great many more deaths," Dr. Clark continued. "In former years it was most unusual for us to have a death from alcoholism. Now it is a more or less common occurrence.

"In Receiving Hospital the number of cases has remained about the same. 'Where do they get the price for it?' you ask. I don't know. We discharge a man from here without a cent in his pocket and in six hours he can get so drunk that the police have to arrest him and bring him back. It's the same way with the dope fiend. In the days when morphine was 55 cents a dram a dope could always scrape together the price for it, no matter how broke he was. Now that it's \$10 he gets it just the same. Nobody knows just how.

"We have more cases at Dearborn because we are dealing there with a different type of man. The alcoholics there have money. They can get

liquor whenever they want it. They are the men whose cases have increased in numbers, in seriousness and in fatalities since the coming of prohibition."

Public Health

TYPHOID FEVER MORE PREVALENT THAN IN 1920

Reports to the State Department of Public Health show a considerable increase in typhoid fever incidence this year over that for 1920. During June, July and August there were 910 cases reported against 511 for the same period last year. A total of 1,324 cases had been reported up to September 1, while only 1,021, a little more than 300 less, were reported for the entire year of 1920.

The results of a large number of special investigations carried out by the Department at various points throughout the State indicate that much of the typhoid fever has been due to the activities of *carriers*. In some instances an entire outbreak has been definitely traced to one or two *carriers* who were engaged in the production and distribution of food products, particularly of milk.

ILLINOIS BIRTH AND DEATH RATES FOR 1920

Figures recently released by the Division of Vital Statistics of the State Department of Public Health show that the general death rate for Illinois in 1920 was the lowest ever recorded with the exception of that for 1919. The death rates per 1,000 of population for the State for the past five years were as follows: 1916, 13.2; 1917, 13.8; 1918, 16.2; 1919, 12; 1920, 12.6. The birth rates per 1,000 population for the same years respectively were 18.5; 17.4; 18.4; 17.2, and 18.4.

During the same period the annual birth rates and death rates for Chicago have been slightly in excess of those for the State as a whole. The death rates per 1,000 of population for the five years in Chicago were as follows: 1916, 14.4; 1917, 14.8; 1918, 17; 1919, 12.5; 1920, 12.8. For the same years, in the above order, the birth rates per 1,000 of population in Chicago were 19.0; 19.3; 19.0; 16.5, and 18.4.

EPINEPHRIN TEST FOR HYPERTHYROIDISM

This test is called the "skin reaction of Goetsch. Eight minims of a 1:1,000 solution of epinephrin hydrochlorid are diluted with an equal quantity of sterile water and injected hypodermically into the arm. Immediately there is formed an area of blanching around the point of injection and about the margin of this usually a red areola gradually shading off into the surrounding tissue. In about half an hour the center of the white area becomes

bluish gray to lavender, and at the end of from one and a half to two hours, the red areola takes on the bluish or lavender color, while that in the center disappears. This lavender areola remains for about four hours from the time of injection, and is the most characteristic part of the test. Accompanying the local action may be increase in pulse rate with palpitation of the heart and an exaggeration of the tremor and nervous symptoms in general.

Society Proceedings

COOK COUNTY

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

Meeting of Jan. 3, 1921 Concluded

Dr. Norval H. Pierce (closing the discussion) stated that Wittmaack was especially careful to say that the process he described had nothing to do with otosclerosis. Otosclerosis occurs in bones that are completely pneumatized, without any changes in the recessus. He thought there seemed to be a great discrepancy between the cases of deafness that occur in adult life and the incidence of otitis media of infants, or sucklings. However, Zuckerkandl, in his study of 268 cases of adult mastoids found only 26 per cent. of cases that were perfectly pneumatized, so there was a certain agreement there. A study of the vital statistics might be of some interest and assistance in determining how many children with this disease really grow to adult life. Wittmaack admits this discrepancy and did not attempt to explain it, but left it to future developments.

Dr. Pierce thought it seemed a bit fatalistic to say that this condition, occurring in infancy, stamped the individual's auditory fate for life. The matter is not, however, as pessimistic as it would seem. It meant that certain problems must be attacked that had not been attacked so far. If the amniotic fluid found its way into the ear, did that constitute a foreign body? Dr. Pierce thought that it did. It was not normally found in the eustachian tube. If it was a normal content of the cavum then that hypothesis would fall down.

Another very practical point in prophylaxis was the proper mode of accouchement. At present the obstetrician holds the head back to save the perineum. They delay labor by anesthetizing the highly developed mother and that might to a certain extent be the cause of the incidence of the condition. All these things must be thought of and prevented or disproved. In the opinion of Dr. Pierce, the book of Wittmaack's is a colossal work and he felt that it was largely founded on facts. The occlusion of the tube must be proven or disproved. Wittmaack had not spoken especially of osteoblasts in dealing with the subject.

GRUNDY COUNTY

Dear Sir: The Grundy County Medical Society met at Morris on the evening of Sept. 15; President Paul H. Anthony presided. Twenty members and six visitors were present. A chicken dinner was served. Dr. B. H. Anndoff of Chicago gave an excellent talk, with the aid of lantern slides, on the subject of "Pneumo-Peritoneum and X-Ray Treatment in Abdominal Diseases." Dr. Allan E. Stewart of Chicago also gave a fine address on surgery and its connection with pneumo-peritoneum diagnosis. The subject was discussed by six members of the society. Meeting adjourned at 11 p. m.

PAUL H. ANTHONY, President.

WHITESIDE COUNTY

One of the most interesting meetings of the society was held at the City Hall in Sterling, September 15, 1921, after a bounteous dinner at the Y. M. C. A. Cafeteria.

There was a large enthusiastic number in attendance. Dr. Perry of Sterling read a paper on "The Treatment of Infected Wounds."

The subject was handled in a masterful manner. His experience in the treatment of infected wounds in a base hospital during the war gave him ample opportunity for observation of the various methods of successful disinfection.

Particular emphasis was given the Dakin-Carrel method which under careful technical management is highly advantageous.

Dr. Harry B. Wright of DeKalb, Ill., senator from the 35th Senatorial District, was present and delivered an address on the subject of "Medical Legislation."

This subject proved to be of especial interest to the society and the address was listened to with the keenest attention.

Dr. Wright was equal to the occasion showing that he had the matter of medical legislation well in hand.

The Society expressed its appreciation of Dr. Wright's address in the free discussion following; one member in particular, remarked: "The best subject for a society meeting I have heard in five years."

Other societies should hear this address and we heartily recommend Dr. Wright.

DR. W. K. FARLEY, President.

DR. W. H. DURKEE, Sec'y-Treas.

Personals

Dr. P. J. H. Farrell has been elected Commander of the Chicago Chapter of Military Order of the World War.

The governor has appointed Dr. Joseph H. Ellingsworth, East Moline, to be superintendent of the state hospital for the insane at Watertown.

The governor has appointed as state alienist, Dr. Charles F. Reid, superintendent of the State Hospital at Dunning.

Dr. Eugene Cohn, superintendent of the Kankakee State Hospital, has resigned, to become effective October 15. Dr. William A. Stoker, Centralia, formerly superintendent of the Anna State Hospital, Anna, has been appointed to succeed Dr. Cohn.

Dr. John E. Meloy, of Peoria, has been appointed chief surgeon for the Peoria and Pekin Railway Company.

News Notes

—Logan County Tuberculosis Association held its first clinic September 8 at St. Clara's hospital in Lincoln. Members of the County Medical Society will take turns in giving free examinations each Thursday.

—Tazewell County's new tuberculosis sanitarium, "Oak Knoll," near Mackinaw, was formally dedicated Sunday, September 10. Addresses were given by Dr. J. W. Petit of Ottawa, Dr. W. A. Balcke of Pekin, Dr. J. M. Masters, who presided, and others.

—The Illinois Tuberculosis Association has ordered 30,000,000 Christmas seals for the sales campaign outside Cook County. Large contributors to the funds will receive beautifully engraved "health bonds."

—Dr. Thomas H. Leonard of Lincoln has been appointed assistant health director for Illinois.

—Dr. Daniel Coffey has been appointed superintendent of Chicago State Hospital at Dunning.

—A \$1,000,000 hospital, to be named in commemoration of Dr. John B. Murphy, is prospected according to a recent announcement. The plans were approved by Mrs. Murphy just before her death. Dr. Frank Byrnes, associate of the late Dr. Murphy at Columbus Memorial Hospital, and at present manager of the Sheridan Park Hospital, is president of the new J. B. Murphy Hospital Corporation. Twenty physicians and the nurses who worked under Dr. Murphy will form the nucleus of the new hospital's staff. The completed institution will care for 500 patients.

—The National Anaesthesia Research Society will hold its annual scientific meeting at Kansas City, October 24 and 25, in conjunction with the Mid-western Association of Anaesthetists and the Medical Veterans of the World War. Hotel Muelbach has been designated as convention headquarters.

All members of the National Anaesthesia Research Society will be welcome and are urged to attend. The Kansas City meeting will be made the beginning of a campaign to be conducted throughout the year in behalf of better education in Anaesthesia and will signalize the inauguration of a movement to assist all teachers and students of Anaesthesia, especially in the United States.

Determination to hold the meeting in Kansas

City was one of the important acts of the Governors at their meeting in Toledo, September 4 and 5.

Incidental to that meeting was the acceptance, on vote of the Governors, of 34 applicants for membership.

The N. A. R. S. embraces now more members of record than any organization of a specialty in the United States. It was decided also to submit a questionnaire to the leading hospitals of the United States with a view to securing more detailed information regarding the practice of Anaesthesia in these hospitals.

—Local doctors believe that Billie and Jack Adams of Bogalusa, La., are the smallest living babies. At birth Billie weighed eleven ounces and Jack seventeen. The midgets appear to be in perfect health. Six brothers and sisters are of normal size.

Marriages

RAYMOND EVAN DAVIS, Ladd, Ill., to Miss Cora Imelda Bradley of East Ottawa, Ill., in Chicago, September 3.

SYLVESTER C. KEHL to Miss Carolyn L. D'Au-trey, both of Chicago, August 10.

WILLIAM M. CRAIG to Miss Ella Branson, both of Petersburg, Ill., August 4.

Deaths

JOEL H. BARBER, Pittsfield, Ill.; Missouri Medical College, St. Louis, 1891; member of the Illinois State Medical Society; died July 29, from carcinoma of the liver, aged 67.

HENRY A. KIMERY, Knoxville, Ill.; Barnes Medical College, St. Louis, 1898; shot himself through the head with a shotgun August 22, while suffering from mental derangement, aged 53.

OSCAR AUGUSTUS KING, Chicago; Bellevue Hospital Medical College, New York, 1878; died September 11, at Lake Geneva, Wis., aged 70. Dr. King was assistant physician, Wisconsin State Hospital for the Insane, 1879-1882; professor mental and nervous diseases, 1882; neurology, psychiatry and clinical medicine, 1894; vice-dean since 1900 at the College of Physicians and Surgeons (University of Illinois), Chicago; professor neurology, Post-Graduate Medical School. In 1883 Dr. King founded the Oakwood Retreat (for the insane), Lake Geneva, Wis., of which he was president and chief of staff; in 1896 he founded the Lake Geneva Sanatorium, and in 1901 amalgamated the two institutions of which he remained di-

rector. At the time of his death he was professor of neurology and psychiatry emeritus in the College of Medicine of the University of Illinois. He was one of the strongest factors on the faculty which finally brought about the incorporation of the College of Physicians and Surgeons into the university.

FERNANDO C. ROBINSON, Wyand, Ill.; Rush Medical College, Chicago, 1863; life member of the Illinois State Medical Society; practiced in Wyand for more than half a century; at one time coroner of Bureau county; also president of the Board of Health; died August 23, from encephalomalacia, aged 84.

JOHN W. MARLOW, Clarksville, Ill.; University of Michigan, Ann Arbor, 1872; member of the Illinois State Medical Society; died August 10, from senility, aged 81.

EDMUND H. CHLOUPEK, Chicago; Northwestern University, Chicago, 1889; died August 23, from carcinoma of the intestines, aged 56.

GEORGE WILLIAM POOLE, Chicago; Kentucky School of Medicine, Louisville, 1888; died August 19, from gastritis, aged 62.

CHARLES ALBERT STONE, Mason City, Ill.; Rush Medical College, Chicago, 1894; died August 19, aged 52.

JULIAN T. OSBALDESTON, Chicago; Michigan College of Medicine and Surgery, Detroit, 1901; member of the Illinois State Medical Society; died August 21, from injuries received in an automobile accident, aged 62.

CHARLES E. CRAWFORD, Rockford, Ill.; Hospital Medical College of Evansville (Ind.), 1884; state health inspector of Illinois sixteen years; active in controlling epidemics and relieving conditions due to public disasters; and chief of district health superintendents recently; previously city commissioner for eight years; member and chairman of council of the Illinois State Medical Society, 1920-21; died August 27, at the Rockford Hospital, from nephritis, aged 66.

The following resolutions were adopted at a Meeting of Division Heads of the Department of Public Health, held in the Office of the Director, Thursday, September 8, 1921.

WHEREAS, Doctor Charles E. Crawford for the past fourteen years a member of the staff of the State Board of Health and the Department of Public Health of Illinois, has been called from his earthly labors; be it

Resolved, That his co-laborers in the Department of Public Health desire to express their appreciation of the worth and the work of their fellow worker, and their regret at the termination of a relationship which has ever been happy and beneficial;

Resolved, That the sympathy of the members of the staff of the State Department of Public Health be extended to the widow and children in their hour of affliction; and be it

Further Resolved, That these resolutions be made a part of the records of this Department and that the Director transmit a copy to the bereaved family.

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Original Articles

FEDERAL AID TO STATES A REAL MENACE

WE ARE NOT READY TO CHANGE OUR BASIC FORM OF GOVERNMENT*

DOUGLAS SUTHERLAND,

Secretary of the Civic Federation of Chicago.

CHICAGO

Are we of the United States of America ready to change the basis of our government from that of a union of sovereign states, each with its own fiscal system and administration and rather independently political subdivisions, to that of a much more dominant national government with the states and their subdivisions as departments subject to a highly centralized national control over state and local finances and, to a large degree, over state and local administration? or

Are we prepared to plunge our national and local governments into a tangle of intertwined financial arrangements, in which Uncle Sam will be called upon to dole out to state and local governments more and more funds to be disbursed by them not only wholly without check against extravagance and inefficiency, and practically without responsibility, but actually in such a manner as to encourage and stimulate local waste and unnecessary expenditure?

These questions are raised sharply by the growing agitation for immediate extension into various fields of governmental activity (established and proposed) of a phenomenon of public finance

popularly known as "Federal Aid." It seems highly desirable that Congress should determine the answer to the first question before it permits itself to be hurried further along the present course of "Federal Aid" in the United States. Otherwise we certainly shall stand committed to an affirmative answer to the latter question—and that would prove unfortunate, if not, indeed, disastrous.

Consideration of this subject is especially timely because two measures, the so-called Maternity and Infancy Bill and the National Department of Education Bill (and possibly others) in which the granting of millions in new "aids" from the Federal treasury to the state governments, is the main feature, now are pending before Congress. These two, alone, would practically double the total of all the existing grants which by now aggregate over \$113,000,000 annually, and they are being rapidly pushed for enactment by their respective groups of enthusiastic proponents.

Just what, then, is this Federal "Aid" which inspires the drafting of bills and summons lobbies to battle? By this term is understood the appropriation by Congress from the Federal treasury of funds to be disbursed to the states, or to local institutions within the states generally through the agency of the state government, and to be used for the local conduct of some designated public activity. The chief, and generally practically the only, condition underlying these grants of "aid" is that the state either alone or with its local governments shall expend for the specific function involved, at least as much money as it is to receive from the national government.

Federal "Aid" in the United States, then, is rather comparable in character to the "grants in aid" of the British government and the subventions of the French, Belgian and German governments, under which certain financial allowances are made by the national governments to the local authorities for the conduct of various specified activities. However, in the theories upon which these grants rest or are supposed to rest, their

*Read before the National Tax Association, Sept. 15, 1921.

*NOTE BY THE EDITOR:—Discussion of matters similar to this paper is unusual in the pages of a medical Journal. Inasmuch as our profession is an important part of the entire citizenship, it is our duty to assume our share of the decision of such matters. The attitude we have assumed in the past has become a menace to our future safety. The medical profession is in contact with every phase of human endeavor. Unless we give the vital things, which affect us as much as other persons, do study and stand for the right, we will have missed doing our duty exactly in extent to the proportion we treat or mistreat such matters.

In view of the fact that so many of our public health officials, especially in southern states, are advocating the plan of State Subsidies, the following article, pointing out the menace to any fifty-fifty plan, is very timely. The present-day trend of medical legislation will increase the taxes enormously without corresponding benefits. There is so much in this paper that applies to the dangers in medical legislation that we publish the paper in full.

origins and the conditions which accompany them, a wide difference is evident between the situation in America and that abroad. In point of fiscal results a similarity again will be noticed, especially between British experience and American tendencies.

The earlier grants of "aid" from the United States government seem to have been designed chiefly to stimulate in a comparatively young country, certain public functions which appeared essential to the welfare and development of the nation as a whole. This was particularly true of the first grants which, by the way, were not in terms of money, but in lands, such as the famous land grants for endowment of the common school funds and, to a much more limited extent, of higher education funds, and the like. In at least one group of these land grants—namely, in encouragement of railroad construction, the grant was to private, and not to public institutions. The first of the money appropriations of this character (at least of those continued to the present day, and it is difficult to imagine that the abandonment of any "aid" once established ever could be procured) seems to have been made in 1887 under the Hatch Act for agricultural experiment stations in the several states. This since has been supplemented by the Adams Act of 1906, under which appropriations equalling in the aggregate those under the Hatch Act, also are made toward agricultural experiment stations locally operated. The Hatch Act was followed promptly in 1888 by the distributive act in favor of disabled soldiers and sailors, and by the Secor-Mavill Act of 1890 in aid of agricultural colleges.

As an instance of the possibilities for growth in the field of Federal subsidies to local governments may be cited figures courteously supplied under date of Aug. 16, last, by the Honorable E. W. Ball, acting secretary of agriculture, showing the total Federal funds available for co-operative agricultural extension work within the States to have grown only since the taking affect of the Smith-Lever Act in 1914 from \$1,485,885 to \$9,039,041, for the fiscal year 1918-19. This probably includes local funds locally raised to "match" the federal funds.

The following list of the current Federal appropriations to local authorities in "aid" of the various objects indicated, gives an even better idea of the very considerable field already covered by our federal subsidies, and of what they may be expected if ill-considered, or un-considered, extensions of this phase of our public finance are permitted:

Object of Subsidy	Amount of Total Appropriation by Congress 1920-21
Support of Disabled Soldiers and Sailors (Act of 1888).....	\$ 1,000,000.00
Vocational Education (Smith-Hughes Act of 1917)	3,362,177.37
Roads (Acts of 1916 & 1919).....	97,000,000.00
National Guard.....	1,675,918.61*

*Disbursement figures for year ended June 30, 1920. The appropriation figure for that year reported by Treasury Department as \$13,194,791.

Venerae Diseases—

Aid to States in Protection of Military and Naval Forces.....	400,000.00
Payments to States for Prevention of.....	1,000,000.00
Payments to Universities for Research.....	100,000.00
Payments to Universities for Research in Educational Measures Against.....	300,000.00
Industrial Rehabilitation.....	777,951.47
Agricultural Experiment Stations (Acts of 1887 and 1906).....	1,440,000.00
Agricultural and Mechanical Art College (Acts of 1890 and 1907).....	2,500,000.00
Agricultural Extension Work (Smith-Lever Act of 1914).....	3,580,000.00**
Arizona and New Mexico from National Forest Funds.....	63,898.43
Arizona and New Mexico School Funds....	24,950.28
	<hr/>
	\$113,594,896.16
To a few States *** under the oil-leasing Act	1,569,007.97
	<hr/>
	\$115,163,904.13

*** According to the Honorable F. M. Goodwin, Assistant Secretary of the Interior, only California, Wyoming and Montana are entitled to substantial amounts under this Act. Louisiana, New Mexico, Idaho and North Dakota being entitled each to less than \$200.

I believe the foregoing list to be approximately correct and, by taking the lesser amount where two figures for the same item have been received from different sources, I have endeavored to err, if at all, on the side of understatement.

It is possible, however, that the list may not be entirely complete as to items, nor precisely accurate as to amounts. There is the greatest confusion in Washington in the keeping of these records of aid granted to the local government. The Department of the Treasury has nowhere a consolidated statement of the payments made to the several states for any given year under the various acts establishing and providing for "Federal Aids." The appropriations, probably of necessity, run to the various departments and bureaus having supervision, and one must apply to each of these for detailed information. This is not always easy to obtain, not through any fault of the officials or public employes who have been exceedingly courteous and obliging in response to requests for information, but because of the complications of the system itself, and the manner in which many of the "aids" have been provided for. Such difficulties of accounting cannot be charged to present officials in the Treasury Department and, as will appear shortly, they are not characteristic of national "grants in aid" in the United States alone, but also draw fire even from friendly critics of the British system.

To this collection of national "aid" appropriations totalling more than \$113,000,000 (without counting the payments which are in the nature of reparations for federalized lands of taxable value), it is now proposed to add still further both to the objects of subsidy and to the amounts to be granted.

** Figure given in table prepared by courtesy of Illinois Legislative Reference Bureau. A letter from the Division of Accounts and Disbursements of the Department of Agriculture gives the total disbursements to the states for the last fiscal year as \$5,080,000.

The two pending measures as already stated alone, would almost double the present amount of "grants" carrying appropriations for subsidies to the states aggregating \$101,450,000, and for administration expenses totalling \$530,000. And for both that would be only a modest beginning.

The so-called Smith-Towner Bill to establish a Department of Education would carry distributive funds of \$7,500,000 for education of illiterates over 14 years of age; \$7,500,000 for Americanization work; \$50,000,000 for general education; \$20,000,000 for physical education and \$15,000,000 for training of teachers, \$500,000 being proposed for departmental expenses. The so-called Sheppard-Towner Maternity and Infancy Bill would carry as a beginning distributive funds of \$1,480,000 (\$4,800,000 originally was proposed), of which \$30,000 might be diverted to administration of the law by the Children's Bureau. There may be other bills of similar general fiscal character, which have not had the organized support and publicity which has been thrown behind these two measures. It has been recently proposed that Federal aid be extended to local governments for home building projects as a solution of the housing problem, and other "grants" have been publicly suggested. Perhaps these, too, are pending as "bills."

"GET THE MONEY"

Of recent years the main idea in the United States behind the different proposals for "Federal Aid" is best embodied in the phrase—"Get the money." The character of the subjects and objects of such subsidizing legislation has been a matter of secondary consideration. Growth of population necessarily has added to the functions of government and there has been also a marked tendency to try both to solve social and economic problems and more and more to safeguard the individual from the vicarious ills of life by putting the government into the position of a sort of mundane providence. All this (together with the war-time increases in cost of government) has swelled tremendously the financial burdens of the municipalities and to only a lesser extent of county and state governments. Enthusiasts with their own governmental interests, or perhaps with special hobbies to promote pressing their demands for public recognition and financing of their own pet projects in the face of these conditions, naturally have been met with reminders that existing local tax burdens had increased heavily and that at best they could get only a part of what they asked. At once they began casting about for that pot of gold at the end of the rainbow labeled "new sources of revenue," about which all public servants soon learn and which they apparently believe to have been located at Washington. Public officials and some public educators who, incidentally, are exempted largely from the burdens of the Federal income tax, have been amazed and entranced at the ease with which Uncle Sam has been able to extract millions and hundreds of millions from commonwealths and communities which appear to groan under the burden of local government. By means of industrious propaganda

they have been somewhat successful in sharing their amazement with their fellow citizens, including many associations of women who have not yet got it through their heads why their male friends and relatives should be so irascible and distraught along about the Ides of March. "If a stingy city, county or state cannot supply the money," say these tax-exempt persons, "why not get it from the national government?" And a great many of the good women of the country—not all by any means, but only those who have begun to vote and to pass resolutions little before they have begun to think out public questions clearly and for themselves—echo "Why not indeed?"

That the "get the money" idea is the compelling inspiration behind the more recent suggestions for "federal aid" is sufficiently indicated by some of the measures themselves.

Federal money is eagerly sought, but any suggestion of federal supervision or direction such as might be calculated to promote efficiency and economy, is strenuously opposed. The present vocational education acts are so lenient and meager in the limitations and conditions imposed as really to require a state to do little more than to spend itself and through its subdivisions a given amount for "vocational education."

The pending Smith-Towner measure specifically provides "that all the educational facilities encouraged by the provisions of this Act and accepted by a state shall be organized, supervised and administered exclusively by the legally constituted state and local educational authorities of said state, and the Secretary of Education shall exercise no authority in relation thereto and this Act shall not be construed to imply Federal control of education within the states, nor to impair the freedom of the states in the conduct and management of their respective school system." In other words, Uncle Sam will simply give away \$100,000,000 upon the basis of apportionment established in the act itself. Does it require a new \$500,000 department of government and a new face at the cabinet table merely to do that?

It develops in the discussion, however, that one of the big possibilities latent in this bill is a three-way method of financing for our public schools. Public school educators of high position, whose opinions in most things are to be seriously considered, have publicly enunciated the doctrine that the public schools should be financed one-third by the nation, one-third by the state and one-third by the local community. Practically throughout the Union there is already substantial "state aid" of local schools with generally little or no state supervision and control. A "drive" is on to increase this state subsidy. In Illinois the amount has been doubled since 1918-19.

It remains only to pass the Smith-Towner bill and this three-way arrangement soon will be in effect. Of course, \$100,000,000 now proposed in the bill will not be sufficient to bring about this balance, but it will be a big step, and with constantly increasing amounts of "state aid" and the local school managements in supreme control of the total expenditure of these revenues from all three sources while being responsible

only to a local constituency which bears *directly* only from a half to a third of the total burden, who can doubt that the national government will speedily be contributing seven or perhaps ten times \$100,000,000? Uncle Sam would contribute soon at least a third of the total educational expenditures of the nation at large—and with nothing to say about efficiency or economy of administration, or even about uniformity of standards. The declaration in Section 9 of the bill that the \$50,000,000 is to be appropriated "to encourage the states to equalize educational advantages," becomes empty rhetoric in the light of the proviso from Section 13, quoted above. Such financing applied to education soon would be extended to other functions.

WHAT BECOMES OF THE TAXPAYER?

What is to become of the taxpayer under this triple alliance of tax rates applied not only to education, but otherwise? He will be between the upper millstone of state taxes, and the nether millstone of local taxes, while a new creation—federal taxes for local purposes, perches and gnaws at his vitals like a vulture. With the two great agencies of our Republic, the nation and the state, contributing two-thirds of the revenues locally expended, and having no control, no direction, no voice even, over their expenditures or in the local administration which they aid, what possible influence could they wield against extravagance? The taxpayer would pay his federal taxes in a lump for all purposes, feeling only a stationary or an increased burden where he had hoped for some relief from war burdens, and with nothing to indicate to what extent the tax upon his labor and industry was defraying the costs of local government and local waste. If he complained to a local official, the latter would proudly show him the local tax rate—producing only one-third of all the money he was actually spending—and say: "That's all your schools (or some other governmental function) are costing you. That rate's so low it's criminal. We ought to raise it."

It requires now a specially trained force of accountants some time to audit the accounts of a reasonably well-grown municipal corporation under straightaway local tax collections and disbursements. It takes our Bureau of Public Efficiency even longer to make the public understand what is really going on. It is, however, still possible for citizens to center responsibility and take the necessary political action occasionally when local finances have been unusually maltreated. Citizens can still manage to keep their local governments more or less in line a fair share of the time. What will happen to our local governments under a hodge-podge, complicated system of revenue through which a man who combined the gifts of a trained accountant, a life-long public official and a life-long financier, could not hope to find his way? What greater camouflage for public accounts could be invented? Anyone in doubt about this would do well to read some of the criticisms on British "grants in aid" to which I shall presently refer.

There is another group of advocates of "Federal Aid" who do not object to Federal supervision for their

projects. Indeed, they would not really mind (so long as the financing was provided for the things they want done) if the federal government had a very high degree of supervision, perhaps more than would be to the liking of Americans generally. They are the ones urging new projects rather than seeking federal financing for well-established local functions. The point of view is different, but the objections to their ideas of federal aid are not less serious than those we have just noted. Badly the financial plan is that the federal government holds out a certain fund upon which the states may draw if they will only set up the required specific machinery to carry on the activity fostered by the Federal Act, and comply with such conditions as the federal act may prescribe.

A BRIBE TO EXTRAVAGANCE

It is a bribe to extravagance. A state legislature may say: "We do not like the basic idea of this movement; it is socialist; it is paternalistic; or, it gives to the federal government so much local supervision as to violate the fundamental principal of state sovereignty upon which these United States were established and of that local independence which we deem essential to the perpetuation of democracy." Or it may say: "The idea is good, but in our commonwealth the work is being done adequately by private agencies or by existing public agencies, or by a combination of both, and it will require constantly increasing and quite unnecessary local expense to set up the machinery your federal act prescribes."

SOCIALISTIC CONSEQUENCES

This is precisely the situation that exists in connection with the so-called Sheppard-Towner Maternity bill and its proposed companion state legislative measures. Indeed, it was the study of, and the endeavor to block, the proposed Illinois Maternity Bills in our legislative session of last winter and spring, which led the civic federation of Chicago to direct me to begin an investigation of this whole subject of federal subsidies to local governments. The leading Illinois bill proposed to enable each county in the state to levy a special tax for the purpose of supplying to every woman in the state who might claim it, regardless of social or financial status, free medical and nursing care and attention for herself while child-bearing and for her children until the attainment of the age of one year. The bill was not sponsored, nor, so far as we could learn, endorsed, by any of the charitable or child-welfare agencies of our community, either public or private. Even our Cook County Commissioners, after consulting the county social service division, opposed it. It is our general observation that private charity is generally much more efficiently administered than public charity; that it is not susceptible to the same political wire-pulling and abuse. Added to this we never had noted a public charity measure so lacking in saving limitations. Always there had been the requirement that only the actually necessitous could be relieved out of public funds, and here was a measure proposing a substantial public service gratuitously re-

ardless of necessity. The only really comparable precedent we could find was in Australia, where since 1912 it has been the practice to award "benefits" to all mothers claiming them, and here we found that the "benefit" had been claimed and paid for practically every child born up to and including the year 1916, and that "when there were no extraordinary expenditures for war purposes, 3 per cent. of the Australian government's expenditure was devoted to maternity allowances" (Henry J. Harris, *Maternity Benefit System in Certain Foreign Countries*, U. S. Children's Bureau Publication No. 57, page 19.) This was not reassuring. The Illinois Special State Health Insurance Commission in its report to the General Assembly in 1919 covered the problem of maternity and infant mortality somewhat fully, and while it found that even with the progress which had been made in reducing these death rates improvement seemed desirable, it recommended no specific legislation further than a further and special investigation of this field. Inasmuch, as in most countries having maternity benefits, these benefits are a part of a public health insurance system and are upon more or less of an insurance basis (with the father or the mother or both as contributors to the fund), and inasmuch as the majority of the Illinois Commission recommended definitely *against any form of state health insurance*, and the minority concurred in refraining from recommending maternity legislation except a further investigation of maternity and infant mortality, it was inferred that the commission did not believe the remedy for these mortality evils necessarily lay in the direction of public benefits or free medical care and attention for all mothers alike.

Christian Scientists, the Illinois State Medical Society and the Medical Freedom people stood together opposed to the bill on the grounds that it paved the way directly for infringement of individual liberties in the exceedingly personal relations of the home, and perhaps for the sweeping aside by the state of strong personal convictions, religious and otherwise, that it was entirely unnecessary; that it favored "state medicine" and threatened interference with freedom of personal choice; that it was paternalistic and socialistic in character and would undermine the foundations of individual independence, which had been the pride and the backbone of American citizenship.

The Civic Federation of Chicago, the Bureau of Public Efficiency and other organizations of taxpayers opposed this state legislation on the ground that it was unnecessary, unsafeguarded against abuse; that it proposed to cover a field already rather fully covered by private and public agencies and to set up a piece of machinery that would be costly to start and burdensome within a short time.

With this mass and line of opposition the Illinois General Assembly gave these bills little encouragement and would have given them even less consideration had it not been for the cogent argument of "Federal Aid."

"The people of your own state will be taxed for this fund, surely you would not deny to your own people some of the benefits for which they pay?" is the line

of argument used by the advocates before the state legislatures.

This appeal, of course, is strongest to the less populous states, because they will get more out of the "pot" than they put into it, but even with the larger states the tendency is to "go in" with the despairing notion that they will at least get something out of the wreckage.

Fortunately at this time, a hope and not a definite promise was all that these agitators could hold forth, or the results in Illinois and in Massachusetts, where the Massachusetts Civic Alliance has been ably combating this propaganda—might have been different.

FOREIGN VIEWS AND EXPERIENCE

Promoters of these various "Federal Aid" measures meet objections to the principle by citing the fact that national "aid" for local functions has been a feature of governmental finance in Great Britain and in the leading countries of continental Europe for many years. Apparently they overlook some of the theories upon which these "grants" were established, the conditions under which they are supposed to be allowed, and the fact that after years of operation, even the most friendly critics complain of administration and fiscal results which cannot be highly approved, especially in England.

A survey of foreign experience and views respecting the intermingling of national and local finance should, indeed, be helpful to those charged with responsibility in our own government.

The "grants in aid," as they are termed in Great Britain, were at first devised for the practical and, not of encouraging a necessary function in a young country, nor yet to get more and more finances for some local government, as in the United States, but actually (amazing as it must seem, our own country and age) to aid the citizen, the local ratepayer, by making possible a decrease in local tax burdens. Moreover these grants carried with them an intended degree of national supervision or control, which would shock painfully the backers of the Smith-Towner bill. Two British economists, moreover (Sidney Webb and J. Watson Grice), who are avowedly friendly to the principle, have agreed upon a theoretical basis for this phase of public finance, which except possibly as to the first point would appear rank heresy to the modern American advocate of "Federal Aid."

Sidney Webb (*Grants in Aid—1911*, p. 15) says (discarding the relief of local taxpayers as an unworthy basis) that the case for "grants in aid" rests upon four grounds:

1. Necessary to prevent an extreme inequality of burdens between one district and another.
2. Of even greater moment than equalization of burdens, they are needed to give weight "by suggestions, criticism and authoritative instructions by which the central authority seeks to secure greater efficiency and economy of administration."
3. They furnish the only practicable method consistent with local autonomy of bringing to bear upon local administration the wisdom of experience, su-

periority of knowledge and breadth of view which, as compared with the administration of any small town, a central executive department cannot fail to acquire, for the carrying into effect of the general policy which parliament has prescribed.

4. "Only by this means can we hope to enforce on all local authorities through the Kingdom that 'National minimum' of efficiency in local services which we now see to be indispensable in the National interest."

The growth of these national subventions in Great Britain was further stimulated from the fact that, lacking the inherent independence of the federal government enjoyed by our own sovereign states and their subdivisions in local matters, the British local governments were called upon to perform many services for the national government. For example: We maintain a separate federal judicial and penal system, and bill the United States government for temporary entertainment of federal prisoners in local jails or penitentiaries, but Great Britain demanded and received this service from the localities until the burden became so great as to constitute an injustice, and in lieu of some businesslike compensation a "grant in aid" from the national government was voted.

Lax, extravagant and scandalous administration of the "poor laws" brought about one of the earliest (and most increasingly expensive) of the British grants, after attempts to exert national influence for reform merely by force of laws giving centralized administration had failed. (Grice—National and Local Finance.) During the period from 1842 to 1908, Grice (*Ibid.* pp. 364-5), among the major objects for which national subventions were granted, either through actual appropriations from the national Exchequer or through allowances from all or part of certain specific revenues (definitely set apart for specified local purposes under the "reform" of 1885), lists: Metropolitan Fire Brigade, Dis-turnpiked main roads, Agricultural grants Poor Relief and Health Work, Criminal Prosecutions, Police and Penal and Reformatory Expense. Under each of these were many considerable sub-items, and the cost to the national government grew for England and Wales alone, from £244,402 in the fiscal year 1842-3 to £8,559,342 in 1907-8. In addition is the very large grant in aid of education which, beginning with £20,000 in 1833 rose to £927,524 in 1871 and to £10,854,889 in 1907-8. Writing in 1911 (*Grants in Aid*, pp. 37-8) Webb reports for the United Kingdom educational grants of £16,405,903 and a total of all grants of £28,820,223, and estimates that the corresponding total for 1911-12 will not fall "far short of thirty millions sterling," with the "total issues from the Exchequer in respect of education approaching pretty nearly to twenty millions sterling."

BRITISH GRANTS ATTACKED

Since then large major items in keeping with the sweeping demands for social legislation characteristic of the period have grown to larger proportions or been

added. I cannot give a complete list, but will note as significant—State Health Insurance, and the "aid to the unemployed," under which we read in the current newspapers under London date line, that "the Islington Board of Guardians which sat for the first time to give out relief under the 'better be a pauper than work' rule, which gives the unemployed head of a family \$20 weekly from the taxpayers' pockets, was swamped by applicants. More than 3,000 persons made application during the day, and as many more are expected tomorrow."

All this growth in England has not been without the notice and criticism of economists and of responsible public men. The national revenues, as has been largely the case in this country, were principally derived from imposts which, directly and indirectly, bore upon the labor and industry of the people as a whole, whereas the local taxes for the most part fell upon the large property owners. As early as 1847 or 1848 these national grants in aid were attacked by radicals on the ground that they relieved land and laid a heavy burden, direct and indirect, upon the people generally. Between 1852 and 1872 the total grants in aid of local authorities was estimated to have increased from £500,000 to £1,146,000 and by 1875 to £2,250,000.

During the ensuing period from 1874, says Mr. Grice (*National and Local Finance*, p. 70), "the burden of the old rates greatly increased, especially in urban areas; new charges in respect of education and sanitation fell mainly upon the same districts; the agitation of the overburdened town-dwellers who had thrown in their lot with the agricultural interests grew more persistent; the relief granted from the Exchequer by transfer of services or subventions in "aid" enormously increased, and the complexity of national and local finance became correspondingly more intricate and involved."

By 1885 these various subventions totalled £3,389,000 and the bearing of their increase "on local expenditures and on the general incidence of taxation for local and national services bulked largely in the discussions." In the next few years Mr. Goschen led in securing certain "reforms" through which he hoped to systematize and simplify the chaotic systems which had grown up and held out the old, but ever-new, promise of "tax relief." Mr. Goschen's proposals appear to have embodied an idea something like our "separation of revenue" theory—now discarded as unsound.

Mr. Gladstone was not so optimistic as Mr. Goschen about the advantages of continuing the system or the possibilities of reforming it. *He urged that no further relief should be granted through the "consolidated fund" until a complete scheme had been entered upon for the reform of local government.* His chief objection to the general principle of grants, according to Mr. Grice (*National and Local Finance*, p. 79-80), lay in the fact that the "subventions had allowed of the local authorities being pressed or forced to much augmentation of expenses." In the discussions, how-

ever, Mr. Glandstone* voiced this further objection: "The transfer of rating charges to the Exchequer, in whatever form it is done, is a question of the transfer from a fund supplied almost entirely by property to a fund supplied in a very large degree by labor. Every time we place a grant in aid upon the consolidated fund we commit the offense of laying upon labor a very large proportion of the charge heretofore borne by property."

Mr. Goschen's views prevailed in general, however, and an attempt was made to simplify matters by setting aside all or parts of certain specified sources of revenue originally enjoyed by the national government, for certain services performed by the local governments.

The results, according to Grice, writing in 1910, and Webb, writing in 1911, do not seem to have justified Mr. Goschen's hopes. Says Mr. Grice:

"The cloud of mystery in which the financial relationship of the central exchequer to the local bodies had become enveloped might almost be regarded as the first line of defense of the complicated system, the second being the vested interests in the distribution which had meanwhile grown up.

"The aim of Mr. Goschen, which was to provide local sources of revenue for admittedly local purposes and to assist services which it is advisable, should be locally administered, but in which the nation, as a whole, had an interest, from the Exchequer, meanwhile keeping local and central funds entirely apart, was 'unquestionably founded on broad and sound principles.' But, unfortunately, these objects were not realized.

CONFUSION WORSE CONFOUNDED

"The simplicity and clearness of both national and local acts, one of the chief ends in view, was certainly not attained; the change only made matters worse. For purpose of comparison with years previous to 1888, to trace the growth of expenditures in any particular service double statements were necessary inasmuch as part of the yield of certain revenues was brought into the national accounts, the other portion appearing only in the local accounts. To make confusion worse confounded the central authorities liabilities in respect to payments in relief of rates which did not appear in the finance accounts so far as they affected England—being met by revenue which was diverted into the local taxation account—yet did appear, but for a part only, in respect of Scotland and Ireland. * * * As a consequence, the national accounts failed to show the entire and true expenditure for which the central government was responsible. * * * Moreover, the Exchequer accounts did not show the total relief afforded to the ratepayers by the central government."

* (Sidney Webb who, as we have noted, is a friend of the "grants in aid" principle, attempts to dispose of Mr. Glandstone's objections by saying—Grants in Aid, p. 9—"To Mr. Gladstone—who never to the end of his days realized either the importance of local government or the superiority, in social value, of administration, over House of Commons, 'politics'—all the grants were alike 'doles,' mere vexation of spirit, raids on the Exchequer by the agricultural interest a wanton encouragement of 'extravagance,' by which term he means merely any increase of expenditure by public authorities.)

"As a result of these complications the local authorities are today in receipt of aid from the central government, which arrives by one or another of three routes:

"1. Direct from the Central Exchequer without any association with the system of assigned revenues, i. e., grants for education, for industrial and reformatory schools under the home office, and for unemployment, the central authorities administering the grant directly and retaining the entire control in its own hands.

"2. Direct from the central government out of the assigned revenues, e. g., grants under the agricultural rates act and for police pensions, of which the former is, a substitute granted to the standing authorities for local revenues derived previous to 1896 from holders of agriculture, and is practically a fixed amount bearing little relation to present assessment and in reality is a general grant in aid of general expenditures.

"3. From the Exchequer contribution accounts of counties and county boroughs (which receive the remainder of the assigned revenues)." (National and Local Finance, pp. 95-99.)

Mr. Webb, after outlining the purpose and theoretical merit of the Grant in Aid and stating that—"according to the conditions and stipulations that are attached to the Grant in Aid, so will be, whether or not we like it or foresee it, its effect on public administration," goes on to say:

"So little have these facts been realized by those who have devised our financial subventions, that we find existing today all sorts of Grants in Aid, for all sorts of subjects, allotted to the local authorities in all sorts of differing proportions and under all sorts of conditions, which very often tend to counteract and nullify each other. The whole field is a chaos which practically no one understands—certainly no ordinary town or county councillor or member of a board of guardians. I have neither space nor patience to set forth even a tithe of the complications and absurdities that have grown up, though a considerable number of specimens will be found in the subsequent pages."—Grants in Aid, p. 7.

"There seems to be among the official publications, no comprehensive or comprehensible statement setting forth all the various subventions from the Exchequer to the different local authorities of the United Kingdom. * * *

"One difficulty is that we have to consider separately that which is paid by the Exchequer and that which is received by the several local authorities. Out of the total of nearly thirty millions a year something approaching twelve millions is paid into the local taxation accounts for England and Wales, Scotland and Ireland respectively; and thence distributed to the local authorities, part of it, indeed, to some local authorities only as conduit-pipes to other local authorities. On the other hand, the Education Grants, the Industrial and Reformatory School Grants, the Distress Committee Grants, and various contributions in lieu of rates are paid direct to the local authorities concerned. Moreover, in some cases, the Grants pay-

able to local authorities are accompanied by other subventions for similar service paid (as for some industrial and reformatory schools in the United Kingdom, and for all elementary schools in Ireland) *direct to voluntary organizations unconnected with local government.*

"The complication of the local taxation accounts dates from 1888, when Mr. (afterwards Viscount) Goschen undertook to simplify the financial relations between the Exchequer and the local authorities, and to make their finances mutually independent. With this object, and altogether ignoring the purposes and results of Grants in Aid to which reference has just been made, he induced the House of Commons to substitute, for the multifarious separate Grants in Aid then borne upon the Exchequer, the assignment of certain revenues (local taxation licenses, and a proportion of the estate duty), by which, as it was hoped, all Grants in Aid would be met. In that way, it was assumed, the treasury would be freed from the burden of an uncertain and steadily rising charge, which inconvenienced the framers of the National Budget. From the outset, however, the scheme was applied only to less than half of the total Grants in Aid. The large and growing Education Grants and the less important Grants for Industrial and Reformatory Schools, together with the miscellaneous contributions in lieu of rates, etc., were left untouched. The treasury was accordingly not freed from the inconvenience and uncertainty caused by the varying annual increases in the Grants, whilst the mutual independence of central and local finances was in no way secured. And the arrangement was promptly upset in other respects. A large addition was made in 1891 by the assignment to the local taxation accounts of the equivalent of the increased duties on beer and spirits, which were allocated among the local authorities on a new and perplexing basis, which nobody understood. Five years later came the Agricultural Rates Act of 1896, under which a certain class of property (agricultural land apart from farm buildings) was to be assessed at half its annual value only; whilst in lieu of the annually increasing deficiency of income thus caused to the local authorities, a fixed sum was to be paid to the local taxation accounts for this distribution upon yet another basis of allocation. We need not trouble to mention minor changes, or the Scottish and Irish equivalents of what was done for England and Wales, which have together brought the total receipts of the local taxation accounts from a little over seven millions in 1889-1890 to nearly twelve millions in 1911-1912; and yet have left the local authorities as they wish with some force contend, financially in a worse position than they were in at the former date. * * *

"How exactly the money is paid out of the local taxation accounts, and especially on what basis the several Grants are allocated among the different local authorities, seems past all finding out. * * *

"Apart, however, from all the local taxation accounts, we have the far larger Grants in Aid administered by the Board of Education for England and Wales, the Scotch Education Department, and the

Commissioners of National Education in Ireland. These Grants, dispensed among a dozen different heads, amount apparently, for the United Kingdom (including the Grants to 'National' schools and voluntary training colleges in Ireland), to more than sixteen millions a year. It adds to the confusion that besides this large sum other Grants for education are issued out of the local taxation accounts, as already described, to the extent of some £100,000 for education other than elementary (the so-called "whiskey money")—now to be temporarily made up of a larger sum—£24,946 for teachers in poor law schools, etc., £264,868 for various kinds of education in Scotland, and £87,806 and £7,910 for other kinds in Ireland.

"There remain certain anomalous payments. Among these are the contributions in aid of the expenses of the central (unemployed) body for London and the district committees in 120 other towns, acting under the Unemployment Workmen Act of 1905. These—our modern recognition, in the most foolish way, of what is called the 'Right to Work'—amounted in 1906-7 to £219,065 for England and Wales, £47,253 for Scotland, and £13,750 for Ireland, a total of £280,068."

After ten pages detailing the involved system of distributing the national Grants in Aid of education alone in Great Britain, Mr. Webb says:

"I hope that I have got all these complications right; but it is impossible to feel sure! One thing is certain. No member of an Education Committee, and no member of the Finance Committee having to control the estimates of an Education Committee, and no alderman or councillor responsible for passing them, even hopes to be able to master the intricacies of the Grants in Aid on which from 35 to 60 per cent. of the income available for its work is based. Quite apart from any question of amount or the inequality of distribution, the local authorities have a real grievance in the incomprehensible intricacies and unnecessary complications in which these Education Grants are involved. * * *

"It is desirable that some inquisitive member of parliament should ask the government to present a comprehensive return showing the total amount receivable from the Exchequer, in aid of any form of educational work, by each local education authority or school board or other public body exercising educational functions in the United Kingdom, and the basis of allocation or conditions upon which such grant or subvention is made; together with similar information with regard to each school (whether day or evening), elementary or secondary, industrial or reformatory), training college, technical institute, university, university college, or other body not being a local governing authority, similarly subsidised from the Exchequer. I believe * * * the variety and complexity of conditions to be even greater than this chapter has sought to reveal."—Grants in Aid, pp. 27-28-30-34-37.

Another English writer (Richard Higgs) is by no means so lenient with the principle involved. In his "Control of Public Finance and Officials," he says

(p. 176): "Rate payers being heavily burdened through muddled and extravagant financing and long neglect of problems of policy, go to a good kind government to help them; the government, being quite willing, puts extra taxation on the same people to relieve the rates, and they all gaily talk about 'finding new sources of revenue' and 'broadening the base of taxation.' * * * It seems almost incredible when looked at as an ordinary business proposition, that people should go to one set of their own paid servants to ask for their own money to pay the extravagant charges of another set of servants. What is wanted in public finance is not broadening the basis of taxation, but narrowing the basis of unbusinesslike extravagance.

"Of all the various anomalies and complications to be found in these public financial statements, one of the worst, to my mind, is the system of government grants. Grants appear to be made from national funds for a number of local services and the payments are the most difficult to understand. These grants, to my mind, are utterly demoralizing to the government and to the local authority alike."

Henry J. Harris, who is reported to be an advocate of "federal aid," at least as proposed in the so-called Maternity Bill, says of this same grant in Great Britain (Maternity Benefit Systems in Certain Foreign Countries, p. 68): "To describe the British system and to analyze the experience under it is an extremely difficult task; no other system of social insurance now in existence is so involved and contains so many features perplexing to the uninitiated. * * * Furthermore, the statistical information published in the reports on the separation of the system is so scanty that one receives little additional light from that source."

Now in the face of this mass of evidence from a nation that has labored with (or more accurately, labored under) the problem of national "aids" for almost a century, and with plentiful indications that our own beginnings in the same field of finance are tending toward the same rocks and shoals of which the British critics write, how can any sane officer of the United States government, executive or legislator, with any sense of responsibility to the people, favor or promote any further extension of our own "grants in aid" until we have at least taken our bearing and faced certain fundamental questions of governmental policy?

To begin with, should we not compare our form of government in the United States with that of the United Kingdom of Great Britain and of the several European countries which have experimented with national subsidies? On the one hand, we find in France, Germany, Belgium, Austria and generally throughout continental Europe, what Grice and Webb called the "Bureaucratic system," in which local administration in the main is entrusted to salaried officials who either are actually appointed by or, at any rate, whose work is closely supervised by, one or another of the main departments of the national government. There may become local governing bodies,

but their functions generally are rather narrowly limited. "At the other extreme," says Webb, "stands the organization of local government in the United States, which may be termed the Anarchy of Local Autonomy, and which had given the United States the worst local government of any country claiming to be civilized." With a sense of satisfaction rather characteristic of his race, and rather amusing in view of his criticism of the system he here lauds, Mr. Webb goes on:

"In the United Kingdom we have, by characteristic good luck, stumbled on a third arrangement * * *. By the unselfconscious invention of Grants in Aid, we have * * * devised a new kind of relation between local and central government, and created a new species or administrative hierarchy, which has attributes of its own, and which, with our particular kind of local government, produces results in a remarkable combination of liberty and efficiency on the whole preferable to the achievements of either the Bureaucratic System of France and Germany or the American Anarchy of Local Autonomy." (Grants in Aid pp. 5-6).

Mr. Webb may be perfectly correct in thinking that a system of national grants in aid (if its tangles could ever be straightened out) may be the thing necessary to hold together in efficient operation the local governments of Great Britain. Governmentally they differ widely from us.

Certainly, however, he fails to understand the basis of our divisions of government if he supposes that the imperfections of our local governments arise from lack of coordination through national control. The trouble with our local governments is that there are too many of them, that they overlap and duplicate and are therefore, expensive and involved. Our counties and cities, however, are far from autonomous. Almost universally the State retains either the authority to grant (subject to revocation) powers of local government, or to check those which a municipality having certain so-called "home-rule" powers of initiation, may have assumed. As to the relationships between the States and the Nation, the Nation deriving its being and sole authority from the States has always held, nevertheless, a sufficient control both of inter-state matters, and of matters which (thus far at least) seemed vitally to involve the National interest, to keep the State governments and their citizens in check whenever that course has been necessary.

During all the years of our development, years of hardship and handicap and sparsely settled country with more "poor corners" in it than there are today, we got along with a comparatively simple system of finance. The federal government financed its functions, the State financed its functions and the localities, as they came into being, financed themselves.

If now, our civilization has advanced to a point where the Nation must do things which heretofore the States and the counties and cities have felt competent

to do; if the functions of local government are becoming so burdensome that they can no longer be locally financed, then, indeed, it is time to see what Federal financing of these heretofore local functions will accomplish. But let us be very sure.

Also, let us make it clear, that, if the local government has come to a stop where it can no longer carry its own burden and must turn to the national government for aid, we want none of the muddled financing which has burdened Great Britain. If Uncle Sam has to finance a function, then let it become a federal function, federally financed and federally controlled. Also before the financing is undertaken it ought to be clearly demonstrated that the function is one of national importance, the neglect of which would materially diminish the general welfare of the country at large.

"The Federal government should appropriate only for those interests which are purely of National concern and clearly within the purposes for which the Federal Union was established," said the Honorable Frank O. Lowden, Illinois' great and constructive "War Governor" in delivering the Convocation Address before the University of Chicago in June of this year, in which he warned of the ambitions of Washington Bureaus and the dangers of Federal and State "Aid."

Let us ask ourselves specifically what local governmental functions are Federal in character and can no longer be adequately supported by local taxation. Does education qualify? The supporters of the Smith-Towner bill say—"Yes, because illiteracy is a curse which blights all citizenship and ignorance bred in some far off corner may be translated into vice or crime in some highly developed center of population." But after struggling all these years and gradually getting the better of illiteracy, with the remote corners of our land growing fewer each year, with the extension of the rural school and the raising of educational standards, not by any centralized control but by the devoted men and women of the educational profession and their professional organizations, is this the time to throw over the system of State and local organization (mainly local) which has brought it about? Shall we either revolutionize it by federalization, or ruin it by an extravagant, unscientific and irresponsible system of muddled finance and control? And can the local governments no longer properly finance their schools? Some extravagant school boards may agree to this. The average citizen will not. The average citizen will willingly bear more taxes for the support of education than for any other object of government. He does, however, like efficient and sane management. Will he get it and will the schools be any better off under Federal "Aid" than they are now? By no means. In Illinois "State Aid" is in the form of a State distributive fund dating back to the time when the State was exercising actively her constitutional duty of providing a good common school education for her children and when the proceeds from this fund constituted fully 65 per cent of the total common school revenues raised in Illinois. With the

development of the local schools this fund became for many years of less relative importance and for a decade or more produced through a mill tax or appropriation in lieu thereof about \$1,000,000 a year. Then there developed the complaint about the poor school district called upon to educate the children of people employed by a mine or other industry lying just across the border of the district and contributing no taxes to the school. However the distribution of the fund on a basis of school population sent money into districts and cities, like Chicago, perfectly able and willing to support their own schools, without giving the measure of relief needed by the poorer school districts. Demands for tremendous increases in the fund are heard (In 1919 it went from \$4,000,000 to \$6,000,000, instead of to the \$8,000,000 demanded, and this year to \$8,000,000, instead of to the \$20,000,000 demanded), yet although it is admitted that to increase the fund to \$20,000,000 on the present basis of distribution would still leave some poor districts in want, the school people united in defeating certain constructive reforms sought by Senator Herbert S. Hicks of Rockford.

This gives us a fair sample of what might be expected from "federal aid" especially under the denial of federal supervision carried in the Smith-Towner bill. There can be no assurance of remedying the (diminishing) ills complained of, and there is every reason to anticipate lax expenditure and constantly growing demands for more revenues, National, State and local.

Are roads a proper activity for federal "aid?" They might be considered if at all on the ground that their importance in times of war and National emergency has developed with the development of the motor transportation. This already is our largest federal subsidy and probably it will be difficult to abandon it, even were it desirable. Certainly, however, if the National government aids in road construction it should insist upon a maintenance of National standards both in construction and upkeep.

Should the administration of justice become a matter of financing and should our local courts and prosecuting officers be subordinated to the Federal system? Should we add to this the entire machinery of law-enforcement, and substitute our local police as is done in England, France, Belgium, Germany and elsewhere abroad?

Should the Federal government be called upon for help in local matters of public charity and supervision of the public health at a time when local governments are giving more attention to the latter than ever before, and when the privately organized agencies for charity are cooperating with one another and with the proper public agencies with results of efficiency never dreamed of in days past? In this field, indeed, which includes pointedly the activities aimed at by the Sheppard-Towner Maternity bill, the Federal Government should proceed most cautiously of all.

We well may weigh the comment of Mr. Higgs (Supra pp. 94-5) that "philanthropy will not mix

satisfactorily with public finance because the finance of philanthropy is on an altogether different footing from compulsory collected rates and taxes." As American citizens we probably are not ready to relieve a man from the care of his family and himself either through the wholesale grants in "aid" encouraged by the Sheppard-Towner bill or by grants in "aid" of unemployment, which are otherwise proposed. Most self-respecting Americans probably will not agree with the quotation from Floyd Dell (*Feminism for Men*) given in the *Woman Patriot* of June 1—"A man is not free until he can tell his boss and his job to go bark at one another; . . . and he cannot do this so long as a woman and her helpless offspring depend upon him for support." Citizens willingly will contribute to help needy mothers and babies, but not to aid families for whose care the father can, and should be held responsible.

Also we should consider that in this field there is the greatest danger of violating our great principle of taxation for public purposes only. Webb notes that parts of certain grants find their way to voluntary boards and managers. (Grants in Aid pp. 34, 36 etc.). Part of our own grants for research work in venereal diseases go to privately controlled universities. The Sheppard-Towner bill carries a broad provision as to extension lectures on maternity hygiene which it is believed might authorize the payment of funds not only to private universities institutions, but possibly to social settlements and the like.

The question of incidence of the burden of extended federal subsidies also arises sharply. Gladstone pointed this out in England, and one wonders whether the recent reported "strike" of the Poplar Borough Council, which refused to levy upon the inhabitants of Poplar the taxes demanded by the London County Council, is by any chance a fulfillment of the vision which prompted his warning. In America at present, it is safe to say that the direct federal taxpayers in most States far outnumber the direct payers of State and local taxes. To relieve the hardships and bad economic features of the highly graduated income and profits taxes there is vigorous demand for some system of sales-taxes and these would tend to spread the direct burdens of the federal government still more broadly among citizens. Under these circumstances it is hard to see how politicians can expect extensions of Federal "aids" and consequently of Federal tax burdens to be well received by the majority of the people.

The whole problem of our fiscal system seems to be involved. None, presumably, will suggest that we "muddle through" as the British have done, and as we have started to do. Shall we then, adopt the highly centralized French system with a Court of Accounts consisting of life members appointed by the President of the Republic and empowered to audit and survey the entire accounts of the nation and its "departments" and of communes whose annual revenues exceed 30,000 francs? That might insure some reasonable degree of efficiency, and safeguard against extravagance, to

which we are clearly entitled if we are to embark our national government in the business of financing schools, poor relief, medical aid, unemployment doles and old-age pensions as is done abroad. And, if we are content to submerge our traditional independence of local government to that extent, should we not secure the benefits of a simplification of our revenue system whereby all taxes for all purposes would be levied and collected by one agency and distributed as dictated by the National government?

Or, shall we cling as closely as we can to the present distinctions between the nation, the State and the local governments and their individual fiscal systems, limiting federal "aids" to grants perhaps in reparation to States whose taxable lands may have been set apart for government use or conservation, and to such existing grants as cannot be disturbed?

Until those questions are fully considered and a sound National policy as to the proper scope of Federal appropriations, is established, Congress has no moral right to create a single new Federal subsidy to local governments, nor to increase existing appropriations of this character. Each step taken in the absence of such a survey is a step toward chaos.

Gladstone urged a halt pending such survey for England in the 'Eighties. Webb in 1911 made a plea for "adoption of some intelligible principle." These pleas were unheeded and in England it may be too late. There is time to save America if Congress will act wisely and deliberately.

PSYCHOPATHIC CHILDREN, THEIR RECOGNITION AND TREATMENT*

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In the general practice of medicine, the group of children that may be classified as psychopathic, neurotic or those who are constitutionally inferior, form one of the easiest problems of diagnosis, but the most difficult of treatment. As compared with the minor and major forms of mental abnormality of the adult, there is much similarity, but one must always keep in mind the fact that the clinical picture is not so clearly defined, is variable from day to day, depending upon the environmental surroundings, for the child does not have the fixed ideas or the complicated associations with repression so characteristic of adult disorders. The underlying factor is, usually, a defective inheritance plus defective environment and training which results in social maladaptation, for it is through inability to adjust themselves to the family, the school or so-

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ciety at large that they are brought for treatment. Recent studies of child psychology both normal and abnormal have demonstrated the fact that these cases are not the products of divine wrath, prenatal influences or any of the other mysterious agencies by which the laity attempt to explain their shortcomings and mistakes, but rather the result of a neurotic or psychopathic home environment in which the child through associations, faulty teaching and discipline, forms abnormal behavior and conduct reactions for which he is not the responsible party.

The analysis and diagnosis must consider as factors the individual, his family and society. Few persons have the opportunity to see and corrolate these findings. The family physician, with his knowledge of the intimate affairs of any family, the inheritance, the eccentricities of several generations, the prejudices of any community, who has ushered the individual into the world as well as assisted in the training during the development period, puberty and adolescence, is theoretically the one most fitted for this task. With the present age of specialization in which unfortunately the mental side is too often neglected, there is a growing tendency to emphasize the focal infections in the individual and overlook the more apparent foci of abnormal behavior among those associated with the patient. In considering the individual, the birth history, the developmental history, peculiarities, their nature and time of onset, intercurrent diseases, traumatic injuries, progress or lack of progress in school, the attitude toward play, work, the family, the teacher, punishment and discipline should all be investigated. One should consider the attitude of all members of the patient's family, the influence exerted by grandmothers, aunts and uncles and the neighbors, for the family are more often at fault than the child. Cleanliness, morality and respect for constituted authority in the home, influence childhood responses. Many times the difficulties are the combination of the whole family group, in which instance we speak of the home situation in which each member may be a contributing factor without their realizing that such is the case. All abnormal emotional states such as antagonism, anger, over-affection, may be traced usually to petty home quarrels that seemed very trivial in the beginning. Society may be at fault because of the neighborhood situation in

which the abnormal behavior and maladjustments are the natural consequences of the environment, whether it be poverty, filth, delinquency and crime, or distorted moral situations. These conditions are just as easily found in a small town, although when massed together as in the large cities they are much more apparent. Danger points are the onset of puberty, death, separation of one or both parents, and the starting into school, where the individual for the first time finds that he cannot do as he wishes, but must conform to the rules and regulations of society. The mechanism of childhood responses and reactions is not the same as that of the adult and too often abnormal responses are considered from an adult viewpoint, whereas that was not the reason that initiated the response. A complete physical, neuropsychiatric examination with correlated psychometric tests and additional indicated laboratory examinations should be done routinely in each case. As additional evidence, all possible information as to progress and behavior in school with written reports of the teacher, principal, children's aid societies and the juvenile court, when delinquency is suspected, should be gathered together.

The cases may be grouped into two general classes: First, those with an organic basis or, secondary, to acute toxic states and, lastly, those of a functional nature where the mechanism is one of disordered behavior reactions, due to lack of training, distorted viewpoints and abnormal environmental states.

The symptomatology of both classes is similar and includes such symptoms as abnormal fears, paranoid states, moods, depressions and elations, hallucinations and delusions of visceral and somatic origin, delinquency and correlated states such as stealing, pathological lying, fighting and destructive tendencies, shyness, feelings of inadequacy, lack of initiative, lack of proper emotional restraint, dreamy states with an overabundance of imagination, lack of progress or arrest of normal progress in school, bed wetting, confusional states, night terrors and finicky eating. The tendency to become seclusive, to repress normal emotions, the development of a shut-in type of personality are often the forerunners of a dementia præcox state. The diagnosis of mental deficiency does not rule out psychopathy for many observers have noted as high as ten per cent. of

these individuals have a coexisting psychosis or psychopathic tendencies. The presence of any of the symptoms named above does not of necessity condemn the individual, but when so grouped together that the behavior and conduct interferes with his own adjustment, or the rights of the community, it is only fair to both that he be considered abnormal and treated accordingly.

There is no sharp line of demarcation between the normal individual, and with the changeable symptomatology observed in children they may often appear normal one day and psychopathic the next, one examination is not sufficient to establish a diagnosis in the difficult cases.

A study of eight hundred neuropsychiatric cases, including one hundred and fifty children by means of specialized tests made by the writer at the Washington University Medical School Dispensary has shown the need of individualization of the patient. As a working basis no attempt has been made to classify, card index or diagnose the cases except along broad general lines for the mechanism and formation of reactions is the approach that has been most helpful in designating the nature of the treatment, instead of treating the diagnosis as is so often the case. The clinical picture may be likened to the alphabet which is composed of numerous symbols which, when gathered together, form words, and words in turn sentences by which we express our ideas. The individual grouping may be changed in innumerable ways. The child's personality is composed of numerous factors, such as antagonism, fear, hate, memory, judgment, etc. Behavior reactions are the result of the combination of factors. Environment tends to classify the behavior reactions into groups. The combination of groups is the clinical picture and expresses the ability or inability of the adult to adjust and adapt himself to circumstances.

The cases with an organic basis are essentially pediatric problems and are not unlike the ordinary cases with only the addition of a superimposed mental picture. Examples of this group are deficient cerebral development, Little's disease, traumatic head injuries, juvenile paresis, congenital syphilis, states secondary to endocrine disorders and disturbed metabolism, including diabetes, acute toxic states such as are seen in chorea, encephalitis lethargica and the acute infectious diseases. The degree of mental de-

rangement depends largely upon the severity of the disease, but many cases are the result of abnormal behavior reactions also, so that just because an organic basis has been found, we should not overlook the fact that in children the underlying mechanism and psychology is not as complex, hence many times overlooked or placed aside as being unworthy of consideration. The treatment of cases with an organic basis should be directed to the treatment of the underlying disease. During convalescence, however, every possible assistance should be given to aid the child in readapting himself, whether it be sending him to the country to regain physical strength, for fatigue tends to lack of concentration and lack of concentration to feelings of inferiority and inability to make up the work lost in school, or to overcoming the abnormal relationship to the family for each sick child is a spoiled and petted individual and this is not conducive to a proper mental attitude.

The second group of cases whose maladjustment is the result of so-called functional causes, the majority of which can be eradicated if we have the means to work with and if we proceed in a rational manner. Malbehavior may be of varying degrees and the causative factor obscure; more often the result of a combination of circumstances acting over a long period of time, which suddenly can no longer be controlled, breaks forth to cause the individual's family to seek advice. Individual childhood reactions are not isolated changes, such as where the injury is the result of a pathological alteration of tissue, and not dependent upon any other factor to make the clinical picture as in pneumonia or a fractured leg, but a complex mechanism with as many variations in interpretation and diagnosis as there are observers. To illustrate: A child of eight years was brought into the clinic for observation. As he sat upon the bench, he displayed the usual amount of interest in his surroundings, was in no way ill-behaved and minded well the social worker who brought him. During the psychometric examination he displayed excellent co-operation, concentration and judgment as well as ability on the form boards and other performance tests; memory was below the average, processes of reasoning in keeping with intellectual ability, but his associations were such that one received the impression that his play-

mates were not of the proper kind. The workers of the clinic were of the impression that he was a perfect angel. Mental age level was nine years. The appearance of his aunt was the cause of a violent outbreak and fit of temper, for he started to yell at the top of his voice, lay on the floor and refused to get up until after the promise of an ice cream cone. On being taken into the room for a physical examination he grew very sullen and refused to allow the doctors to examine him in any way, would not talk and cried when touched. The report from the teacher stated that he would not work, was lazy, inclined to tease the other child and was one of the most troublesome cases that she had had for some time. The neighbors refused to allow their children to play with him for he was rough and killed the little chickens by picking them up and squeezing them to death in his hands. He enjoyed beating animals merely to hear them cry. Among playmates he was a coward, so far as the boys his own age were concerned, but a bully among those younger when he thought that he was capable of whipping them. His desire was to grow up and go out West and be a cowboy. There was a history of masturbation as well as sexual irregularities with the little girls and boys of the neighborhood. When occasion offered he stole money from his aunt and articles from the neighboring grocery store, but it required a great deal of watching to detect these acts. His seven brothers and sisters all impressed his wrong doings whenever opportunity offered so that he slipped away from home to the seclusion of a neighboring barn. Once after being chased from home he sought to get even with the owner by setting it on fire. The neighborhood regarded him as a little devil. He drank coffee, slept in a room with the windows closed, and retired late usually, after having witnessed some thrilling movie which caused him to pass a restless night. The father had deserted the mother of this child, and as the mother had led an irregular life as a prostitute, the children had been removed by court decree.

This case will show the interrelationship of hereditary, physical and environmental factors, and the need of a carefully worked out survey of all the aspects. What can we do for a case such as this which upon casual observation seems hopeless? First, we should change his habits by

having him go to bed early, forbid the coffee and allow him to go to only personally selected movies. The boy could never progress in the neighborhood so that he should be removed, placed in another family, preferably where there are no children, and in the country where the numerous temptations of city life are as far removed as possible. The evasions and lack of correct sexual knowledge should be explained so that there is nothing mysterious, taking care to see that the moral side is not overemphasized so that repressions are set up. Much of the former dislike and inattention in school can be overcome by instilling a desire to make something of himself by helping him to cultivate better habits of adaptation to the problems of life, a respect for constituted authority, and a desire to live in the present rather than in the past or future. In this case there has been improvement, but it is too early to promise a complete transformation of a devil into an angel in the short space of a few months. Too many are content to merely transfer the individual to a new environment and let the environment do the rest and when poor results follow blame the system. One should remember that children learn through associations and habit, but habits, especially those which call for effort and concentration, are not easily changed, sometimes months pass before improvement is noticed. There are many lessons to be learned from the study of a single case. Just because a child does not get along well in school is no criterion of his mental state for, as in this case, the boy, although he did not study, was able to maintain his grades, in fact, the intelligence tests showed that he was above the average. Repeated examinations have demonstrated that the majority of these psychopathic and neurotic individuals are above the average mental level, and it is this superiority that many times causes them to get into trouble, for they hear, notice, as well as read things which they do not understand and the perverted viewpoint thus obtained results in abnormal behavior reactions. The abnormally bright child should be cause for as much study as the mentally deficient and this type is too often neglected. Many of the valedictorians of classes later in life have mental breakdowns and not a few develop psychoses, among which dementia præcox predominates. If dementia præcox, as many believe, has its onset as the result

of disturbed behavior reactions in childhood with repression and the mental picture of the dreamy type of individual who has always built air castles, lived in a world all his own without the restrictions and difficulties that characterize life as usually found, who is hypersensitive, resents criticism and retreats rather than meets difficult situations, who puts off to the future things which should be done today, and then concocts elaborate excuses in which the blame is placed on someone else, it behooves us to watch the formation and, when possible, correct abnormal reactions in the beginning rather than when once formed.

Another potent cause of mental trouble is a lack of proper sense of dependence, the individual being too dependant or not enough so. The case mentioned before portrays the dangers of lack of dependence, whether it be in so far as the family, society or in something higher in the form of religion. Puberty is one of the danger points to be noted in this connection, for he begins to realize that there is something also to life besides having a good time and his mind ponders as to just how he can best spend his life. His interests begin to be heterosexual, and the formation of attachments to members of his family may, later in life, be the cause of much mental anguish. Children are very suggestible and react according to the home influence. Those brought up in the company of neurasthenic parents early in life develop the train of symptoms that are so well known. They early learn that it is a most easy way of meeting disagreeable situations such as staying home from school under the pretext of having a headache when the lessons have not been learned. Unfortunately, all children are not of the same mental make up, for there is every degree of variation of the phlegmatic type to the high irritable sensitive nervous system and too often the doctor, the teacher and the parent try to treat them all the same without considering that statements made to one would cause no outbreak, but to another would precipitate a mental depression that it would take months to overcome. The modern school is many times responsible, for it too often tries to make those whose qualifications are the poorer rush to keep up with the brighter. Other

times it is in forcing bright pupils to do more than they should with the promise of honors or prizes which are soon forgotten after graduation. If there is no abnormal inheritance or neurotic tendencies, the child probably gets along all right, but too often this is the onset of behavior changes.

One cannot in a paper of this length more than touch on a few examples of abnormal conduct and can only suggest the way in which each case is approached. In summarizing the diagnosis of abnormal children individualization is the keynote to success, in which the home situation, the environment, the inheritance, the physical and psychiatric examination all play a definite part.

The treatment should be preventive whenever possible. Children should be taught to express their emotions, to concentrate upon the work at hand, in other words, play while they play and work while they work. They should be taught to assume a normal attitude toward religion, difficulties of any description, whether they be at home, at school, present, past or future. Orderly habits as well as associations and thoughts are conducive to mental health. Dependence in so far as is necessary to obtain the proper spirit of co-operation and much needed advice, but the individual child should not be encouraged by any parent just to obtain sympathy over the most trivial of injuries. Repression of ideas, especially along sexual lines, should be guarded against and no parent or physician can ignore the child that comes to him for information, no matter if it seems to be perfectly simple for the habit of being turned aside is usually the forerunner of repression, and later abnormal behavior.

Whenever an abnormal mental state has developed, one should seek the cause for it may be varied and lie in the most unexpected and unexplainable places so no stone should be left unturned.

DISCUSSION

Dr. Frank Parsons Norbury, Springfield: This paper represents an advance, I think, in the special functions and duties of the physician in reference to his community. In other words, it is an endeavor to enter a wedge into the community in reference to special problems of mental hygiene. It is the problem in mental hygiene of the child and an effort to meet the factors of circumstance and environment with which he seems to be out of adjustment. You all know

that every year there are many hundreds of little fellows who have their tonsils removed and are brought to the physician because of abnormal conduct with the hope that this will be the outlet of the problem in which he finds himself. There is scarcely a week that I do not see these cases, and they are found in all kinds of homes. In homes where social conditions should be the best these problems are often the most difficult with which we have to deal. The paper emphasizes to me the community problems with child hygiene. When I was connected with the State service we tried to maintain clinics to meet these special problems as they occur in the public schools and juvenile courts. These problems are with you always. I feel that Dr. Smith has contributed a very valuable paper to this society because a medical society should take the lead in these problems. It should not be left wholly to the social agencies, of which we have so many. It is a social problem, of course, but the physician should deal with the social problems in the community, and the social conditions under which we live. This paper should stimulate interest in these conditions.

Dr. Charles F. Read, Dunning: I wish to emphasize what Dr. Norbury has said about this being the sort of paper that should be brought before the general practitioner. The general practitioner sees these children in the community and is naturally the first to be consulted concerning their behavior. He often-times will recognize irregularities in conduct and behavior in the child even before the parent thinks of consulting him in the matter.

Another point which should be emphasized is the fact that misbehavior in children does not rest entirely upon an intellectual basis. That is, a child may be fully developed mentally and yet misbehave, because there is an abnormal component of emotion or of interest, as we often speak of it. That is, the child's interest is directed along improper lines by faulty education and psychic trauma during his childhood, and he develops a bad character along one line or another.

Another point is that the child who is studious, well behaved, but not a "good mixer," seclusive, sensitive, a day dreamer and all that, may be more in need of attention than the ordinary bad boy or mischievous girl. Such a child needs a change in environment and interests as much as many other more obvious cases. Our teachers need instruction along this line, as do the parents. It is all a part of the great movement of mental hygiene and deserves the thoughtful attention of the whole medical profession.

Dr. Groves B. Smith (closing): I wish to thank Dr. Norbury and Dr. Read for bringing out the mental hygiene aspect of the work. I did not have time to bring it out, but it is the keynote to the proper solution, and if adequate attention is paid to it instead of allowing these children to grow up into psychopathic individuals or those with neurotic tendencies, these abnormal states may be prevented.

VISCEROPTOSIS *

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When man raised his head above the other animals and decided that henceforth he would walk upon his hind legs, he imposed certain physical disabilities upon his descendants which have persisted through all the ages, despite Nature's best efforts at compensation. In the quadruped the intestines hang by long mesenteric attachments so that they swing freely in the abdominal cavity, maintaining their relative positions through the horizontal posture of the animal's body. The pancreas of the quadruped lies between the layers of the mesentery. But in the monkey, which is a quadruped with a tendency to stand erect, the pancreas has become adherent and the duodenum is more firmly fixed than in those animals who are content to pursue their walk of life on four feet.

In man the great omentum goes down over the transverse colon and adheres to it and the omental bursa is usually obliterated by the adhesion of its layers together. The pancreas too, has been rotated behind the peritoneum and fixed to the abdominal wall.¹ Thus man has been forced to pay a penalty for his superior position, for in a large proportion of cases we find that the ligaments have proved insufficient to maintain the abdominal organs securely in their prescribed positions, and the individual suffers from their lack of efficiency in the performance of their normal functions.

Sometimes the support has always been insufficient—here we have *congenital* visceroptosis; in others it is the strain of adult life and contacts, particularly that of recurring pregnancy and labor which, by diminishing intra-abdominal pressure through relaxation of the abdominal wall, absorption of fat, or loss of perineal support, brings about an *acquired* condition of visceroptosis. This second class is usually much more amenable to treatment—surgical especially—for as the supports were originally able to do their work they will afford a basis for surgical repair. In the congenital class the particular condition of ptosis is associated, as a rule, with such general structural malformations that while

*Read before the 71st annual meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

the organs immediately under consideration may be restored to their normal positions and functions and the patient accordingly benefited, continued normal health is not necessarily secured.²

It was in May, 1881, that Franz Glenard announced the results of the experiments and investigations which had led him to conclude that many so-called nervous diseases were in reality due to a prolapsed condition of the viscera, more especially the stomach, transverse colon and right kidney. This was a wholly new conception, and its acceptance at first was slow. His discovery marks an era in the progress of medical science, although his original theory has, of course, been greatly extended and modified. According to Rovsing he attributed the cause of enteroptosis to an "enigmatic nutritive disease, a *diathese hepatica*,"³ which involves atrophy and subsidence of the small intestine, so that the organs lying above lose their support, which in turn leads to gastropptosis and other prolapsed conditions. This theory has now very generally given place to that of Stiller, which replaces Glenard's mysterious liver-disease with a so-called "universal asthenia," a weakness and laxity of the entire bodily structure, as well as of the individual tissues. The ptosis and constipation are due to laxity and atony of the tissues, the pains and nervous symptoms to neurasthenia, the whole syndrome being simply a manifestation of degeneration. Inasmuch as degeneration is incurable it naturally follows that all adherents of this belief regard surgical intervention in enteroptosis as wholly vain and useless.

In direct opposition to this point of view was the position taken by Arbuthnot Lane and his followers, who confined their attention particularly to the colon. Because they so frequently found this organ in locations other than that in which the standard textbooks on anatomy had always placed it, and also because it was so prone to present numerous kinks at the various curvatures in its course, they advised resort to the severest surgical measures, even complete extirpation of the entire colon. While this view is now recognized as being far too radical, at the same time it served to make more generally recognized the fact that the displacement of organs may markedly interfere with their normal functions.

The great advance in diagnostic methods rendered possible by the development of x-ray tech-

nique, now makes it an easy matter to discover promptly when organs are in a prolapsed position. The difficulty is to decide to what extent the symptoms may be attributed to these conditions, and often the truth has only been made evident by the final results of a treatment applied in accordance with a hypothetical diagnosis.

Most of the symptoms of visceroptosis occur only when the erect position is assumed; they consequently disappear on lying down, and are absent at night; they are temporarily relieved when the lower part of the abdomen is compressed by the hand or other means, and in women they frequently show a steady improvement as pregnancy advances, owing to the support given the viscera by the increasing size of the uterus. They are often more pronounced in the latter part of the day than in the morning, because of the progressive relaxation of the abdominal muscles resulting from fatigue.

The symptoms have been ascribed in turn to the kidney, stomach, intestines and uterus, according to which organ happened to be the especial object of study. It is more than possible, however, that the general effects are commonly of more importance than those due to ptosis of any individual organ.⁴

In analyzing the effect of visceroptosis on digestion and assimilation, two possibilities must be recognized: first, the alteration in the secretions of the various organs from interference with their circulatory and nervous systems, producing local and—in the case of internal secretions—possibly remote effects; and second, delay in the passage of the intestinal contents. Both of these favor increased bacterial growth and the ascent of bacteria into the upper intestinal tract where they are normally few.

These considerations have led Rovsing to say that few surgeons have any comprehension of the enormous pathologic significance of gastrocoloptosis, nor of the therapeutic problems associated with it. But most medical men have come to agree that the majority of the patients in whom one finds this condition suffer to a great extent from a series of symptoms of which constipation is the first and most constant, while cardialgia, vomiting, emaciation, and a host of nervous symptoms are added little by little, completing the wretched picture which these patients present. But here unanimity ceases, for while Rov-

sing and his followers believe that these morbid symptoms are a result of the ptosis and advocate their relief by surgery, another school of opinion looks upon the ptosis as an irrelevant coordinate symptom. A more careful and intelligent classification of cases would perhaps do much to harmonize these conflicting views.

Bettman⁵ divides cases of visceroptosis into three groups: 1. Where one or more organs are prolapsed but the individual is in good general health; 2. the individual is sick and has prolapse of one or more organs, but his symptoms can be relieved without reference to the ptosis; 3. the patient has symptoms which cannot be relieved without special attention being given to the displacement of the abdominal organs and to the conditions which underlie and occasion them.

This third group, he claims, is by far the smallest of the three, but it is the failure to recognize this fact that renders much of the abundant current literature on visceroptosis not only futile, but actually harmful. To consider it as a clinical entity of and by itself is to mislead the inexperienced clinician, to arm the roentgenologist with a facile instrument of often unintentional deception and lead the ambitious surgeon into a field of action where he can often do more harm than good.

Rovsing, who regards the condition as being practically confined to the female sex, divides all cases into virginal and maternal, the first class being those who usually give evidences of ptosis about the time of puberty and the assumption of corsets and tight belts—garments which he regards with great disfavor. The second class is composed of those patients in whom ptosis only appears when successive pregnancies and labors have distended and relaxed the abdominal wall, altering the intra-abdominal pressure and causing failure of the support heretofore offered to the subdiaphragmatic organs by the air-filled intestines.

While the authority of Rovsing can hardly be questioned there are still some objections to his classification, for despite the much greater frequency of visceroptosis in the female, it is by no means wholly confined to that sex. Lambright's⁶ division into congenital and acquired visceroptosis seems a more exact one, and his description, founded on that of Stiller, and augmented by

his own observations, offers a better working basis.

Congenital Visceroptosis: The subjects are of a definite type and encountered in all walks of life, often enjoying the very best of health. They are of long, lean build and when stripped will be seen to have steeply falling ribs, wide intercostal spaces and an acute epigastric angle. The thorax impresses one as being unusually long, and when the distance from the lowest rib to the crest of the ileum is measured, it will be found to be much less than in a person of average contour. This factor alone will produce a much smaller abdominal cavity and the pelvic cavity will appear large with the organs accommodated therein. In some well-marked cases one cannot but recall that the chest compares favorably with the type that has long been recognized as being predisposed to tuberculosis. If the cardiac area is observed it may be noticed that the impulse is lower than usual, and that sometimes there is a cardioposis, but more often it only appears so from the falling ribs and wide spaces. The examination of drafted men during the war often showed these subjects to have harmless systolic functional murmurs. An examination of the spine may show scoliosis, or kyphosis. As has been stated, the panniculus is poor. With the bowels thoroughly evacuated, the right or both kidneys may often be palpated or movable, this becoming more marked in the upright position. Sometimes the spleen or liver may also be palpated. Gastric and colonic inflation, with percussion, will reveal the organs to be displaced.

To the radiographer we owe much for his contribution not only of exact information of the stomach's location, but also concerning its size and conformation. His work has shown us that there is no one stereotyped form of stomach. There would seem to be two large groups: first, the cow-horn; second, the fish-hook; and there may perhaps be a third—or a more exaggerated form of the second—the water-trap form. Our observations in fluoroscopic screen work have shown that the first and third types are found more frequently in the subjects of congenital visceroptosis. It may be concluded that if there is no retention of a meal for more than six hours, and motility, peristalsis and contour are normal, the functions—insofar as one is able to discover—are being carried on in a normal manner,

regardless of the position of the organs. Such a case will cause much speculation as to the origin of the gastric symptoms, and will also give the poorest results in the way of treatment.

Acquired Visceroptosis: In order to form some idea of how displacement of the abdominal organs may come about to such an extent as to produce symptoms in a previously healthy person, a description of the anatomical supports of the organs may be helpful. The abdomen may be regarded as a flattened cylinder with the spine, sacrum, ribs and muscles passing from the pelvis to the lower ribs, forming a strong unyielding barrier. The ribs are lower at the sides than at the front, where they curve sharply upward to their junction with the sternum. In front the condition is somewhat different, as from the thorax to the pelvis there is a greater distance where there is no sustaining framework, the muscles being the only supports. Anything that weakens the anterior abdominal support will allow downward displacement of the organs to the extent of their supporting ligaments. And if the barrier yields, that is, if because of fatigue, defective balance, or other causes—the center of gravity changes, there will be displacement to the extent of the relaxation of the ligaments, which are in reality nothing more than bands of peritoneum with fat enclosed. The abdominal fat is another important factor in holding the organs in position. Its chief role is to keep the kidney in place, but it also acts as a pad by filling in the interspaces between the abdominal organs.

This explains the importance of preserving the strength of the anterior abdominal muscles during confinement, as any considerable weakening of the muscle fibers which form the only support in front, may lead to a ptosis of the abdominal organs severe enough to produce symptoms. It is a not uncommon experience, when examining women who have had multiple pregnancies to discover that the fibers of the muscles feel like tissue paper. If much adipose has accumulated in the abdomen, it is difficult to palpate the muscle fibers, but the protuberant abdomen below the navel and the concavity above when in the upright position will be of some assistance in forming an opinion.

Another very frequent factor is the weakening of the abdominal muscles and decrease of intra-abdominal tension after the removal of large

tumors; still other important influences are faulty habits and attitudes, anemia, or the decrease of tension following the removal of large amounts of fluid. Long exhausting diseases will likewise induce the condition.

Treatment: Goldthwait,⁷ speaking from the standpoint of the orthopedist, says that the ideal in the treatment of such conditions is to restore the body as nearly as possible to the normal poise, so that the proper relationships may exist in all its parts. We know that it is impossible to change the general shape of the special organs, or the general character of the ligamentous attachments. If the congenital type exists, it must always exist. But the best function of a perfect organ cannot take place unless all acquired or unnecessary interference is removed. It is well known to those who have given special study to the subject that even when the congenital type exists these patients rarely have symptoms in early life indicative of visceral disturbance. The symptoms developing later are undoubtedly due to the increase of the downward displacement of the organs or the peculiarities in their formation which must come from long continued use of the body in the upright position. Since Nature's plan is to repair damage, it is reasonable to expect that the relief of the strain which caused such symptoms will be followed by improvement with the retraction of the visceral ligaments, exactly the same process taking place as that in a relaxed joint after the removal of strain. A good prognosis is usually possible in such conditions if the acquired features of disturbance of poise and visceral sag can be overcome. The correction of the poise or the remodeling of the body is at times comparatively simple, and can be accomplished without interfering with the active life of the individual, but at other times the condition is so severe that more radical measures are necessary.

Rovsing⁸ and Coffey⁹ are not so sanguine regarding medical and postural treatment. Confinement to bed and a course of fattening food may be administered in the hope of developing the fatty stuffing in the inner organs as a support for the stomach and to retain the other organs in their proper relations when the patient gets up again. This treatment rests on a correct comprehension of the nature of the condition, and is usually very effective; the patient im-

proves, often with remarkable rapidity. But once more returning to his ordinary mode of life and activity, the old symptoms will gradually return. In a few cases,—notably women who have no need to work—such treatment will enable them to lead a bearable existence. But there cannot and ought not to be any question of rivalry between medical and surgical treatment—if for no other reason than that these patients always first consult the medical man, and when all medical efforts have proved vain, they are forced to seek the surgeon's aid. It is then only a question of whether the case lends itself to bandage-treatment or whether it demands operative intervention.

Rovsing has used various trusses and supports, but has found them all ineffectual with most cases of virginal ptosis, as well as those particularly severe cases of maternal ptosis where the colon transversum has subsided low into the small pelvis, and is on that account beyond the range of the belt, which squeezes without raising it. Then the patient's only hope is in an operation which will raise the stomach and colon to their normal position. For the achievement of this we are in possession of various methods: 1. Direct gastropexy, as Duret and Rovsing himself performed it; and 2. the indirect operations which endeavor to raise the stomach, either by basting together and shortening the omentum minus, as proposed by Stengel, Bier and Beyea; or from below, as performed by Coffey, which by stitching the omentum majus firmly to the anterior abdominal wall, raises the stomach and colon. Rovsing regards Coffey's method as the more rational and better devised, because in many cases the omentum majus is strong and well preserved, and owing to its being fastened to the anterior abdominal wall permits the raising of the greater curvature as well as of the transverse colon to take place, as well as stretching the transverse colon, on which—as we all know—the stomach should normally rest. But he claims, that after employing Coffey's method on a number of patients they all came back to him, complaining not only of the old symptoms, but of new ones arising from omental adhesions, pain, constipation and diarrhea. The reasons for this are: first, that the omentum can be fastened to the sides of the center line to only a very limited degree, thus leaving room for a

subsidence of the fundus ventriculi in the left side, so that a bend between the free and fixed parts can very easily occur; second, that the omentum is very slack and its adhesions, therefore, are easily drawn out into long ribbons which present the danger of ileus.

Because of these objections, Rovsing returned to the method of direct gastropexy, which he performed much after the method first employed by Duret of Lille. Duret, however, used only a single thread of silk in fixing the lesser curvature of the stomach to the upper part of the parietal peritoneum, which Rovsing regarded as too insecure a fastening. He accordingly led three strong silk threads in and out through the serous coating of the anterior surface of the stomach, leaving the pars pylorica (which Duret had fixed to the anterior abdominal wall) entirely free. The upper thread he placed close under the lesser curvature, and the other two—with an interval of about 2 cm. in such a way that the greater curvature and a good-sized section of the wall above this, are left free. The serosa coating between the threads he scarified in all directions with a fine needle, as well as the surface of the parietal peritoneum, and lastly that part of the under side of the liver, to which it is wished to have the stomach adhere. The ends of the silk thread were led out and through the entire thickness of the abdominal wall, that on the left as far from the center line as the rib-curve will permit, and that on the right about 3 cm. to the right of the center line. The peritoneum is now joined with catgut and the fascia and skin with aluminum bronze and after the line of the wound has been covered with collodion and cotton wool, the silk sutures are tied over a glass plate covered with sterile gauze, the dimensions of which are a little larger than the stomach's surface, which has been fixed. In this way it follows that the anterior surface of the stomach lies flat, and close to the abdominal wall, without shrinkage or folding. These threads are left in place for four weeks, when they can be easily removed. Thus a perfectly secure and solid adhesion can be obtained without leaving any foreign body in the abdomen.

Personal Observations: A personal study of a considerable number of cases of visceroptosis which have come under my care in recent years, leads me to conclude that only temporary bene-

fit, if any, can be procured in the severe cases, by the application of the usual non-surgical methods. My opinion as to the benefits to be derived from the various surgical methods is based on the results in ten cases operated on by me. Compared with the much greater number of cases operated on by others, these few cases would hardly justify report were it not for the gratifying results obtained, in the majority of these cases.

The first two cases were operated on by the method of Beyea, and in the remaining eight Rovsing's method, with slight modifications in some instances, was employed. One of the cases operated on by Beyea's method died of pulmonary embolism four days subsequent to the operation; the other showed no improvement in health and died two years later of causes entirely independent of this condition. Of the eight cases operated on by Rovsing's method, six have been almost entirely relieved of all symptoms due to the ptosis. The remaining two have been considerably benefited, but as they are of a more pronounced neurotic type, some of their nervous symptoms still persist, but the patients show a tendency toward gradual improvement. None of the cases were of the so-called "maternal" type. Their ages ranged from 20 to 44 years. Of this number only one was a male.

I am convinced that Rovsing's method is the ideal procedure, for the reason that the organs are securely and permanently held in their proper positions, whereas in the other methods there is a strong likelihood of a recurrence of the ptosis, owing to the stretching out of the ligamentous supports which were originally impaired by structural changes, and with Coffey's method, as has already been spoken of, remote post-operative complications are possible.

A criticism sometimes brought against Rovsing's method is that the broad adhesion of the stomach to the anterior abdominal wall causes interference with the physiologic motility of the organ, and brings about an acute bending of the pylorus from the downward pull of the other abdominal viscera. I feel that this criticism is not justified for the reason that the pylorus and considerable of the anterior surface of the stomach near the greater curvature are left free, and the pull from below is prevented by suspend-

ing the transverse colon and other ptosed organs at the time of the operation.

In the cases I have operated on by Rovsing's method, these criticisms have not been borne out, nor have I been able to find any record of such results in the literature I have consulted.

Conclusions: 1. In order to arrive at an intelligent understanding of the pathogenesis of visceroptosis and allied conditions, the interdependence of human and comparative anatomy and embryology must be taken into account.

2. The question must be decided whether all cases of this nature are attributable to hereditary influences, or congenital stigmata, directly or indirectly, or whether there are cases of ptosis that are strictly independent of such influences, but which are brought about by mode of living, vocation, and the various systemic infections.

3. Of no less importance is the knowledge of environmental incidents and habits of infancy and adolescence, and their influence on the structural development of the body and its component parts.

4. Due consideration should be given to the co-relation of the endocrine and autonomic systems and extraneous hostile influences—focal infections, etc.—with their bearing on the structural-functional mechanism of the organism.

5. Granting that it is true that all cases are the result of degenerative conditions which predisposes the individual directly or indirectly to such structural weaknesses, nevertheless, is it not reasonable to assume that, irrespective of the origin and nature of the disease, any procedure that will permanently correct the mechanical defects, and thus benefit the health of the individual, is a rational measure?

6. If relief of the symptoms can be brought about by a permanent support of the relaxed organs, and the various appliances and hygienic measures usually adopted fail to give the desired relief, in the aggravated cases, irrespective of their cause, is not surgical intervention primarily the preferable procedure?

Case 1. Mrs. F. C., aged 32 years, housewife, nullipara, neurotic type, complains of pain in the left hypogastric and right iliac regions, gas distention, nausea, headache, regurgitation of food, pronounced constipation, insomnia, nervousness, and irritability. Has had previous operations for floating right kidney, and uterine displacement. Physical examination: Fairly well nourished individual of slender build and anemic

appearance; heart and lungs, negative; blood and urine, negative; systolic blood pressure 120 mm. Pelvic examination showed negative findings with uterus in good position. Right kidney palpable but stationary. Abdomen distended and bulging in lower part. Slight concavity of upper abdomen with distinct aortic pulsation visible. X-ray examination revealed stomach and transverse colon resting low in abdomen. Stomach was of fish-hook variety. Gastropexy was performed by Rovsing's method February 28, 1918. No post-operative complications, patient being discharged from hospital in five weeks. She gained rapidly in weight, and constipation and gastric symptoms were completely relieved, but nervous symptoms persisted until recent months. At the present time she reports herself as being perfectly well.

Case 2. Miss R. M., aged 26 years, teacher, consulted me in August, 1918, complaining of what she called "nervous indigestion," and pain and soreness in the abdomen from which she had suffered for several years. She stated that no treatment that she had followed had given her any relief and she had become quite despondent. Bowels would never act without assistance and nothing she ate seemed to agree with her. She was very weak, and tired easily when she exerted her mind or body. Examination of the thoracic organs and blood and urinary analysis were negative. Her appearance was that of an undernourished person—she was pale and quite thin—pulse, 80, temperature, 98, systolic blood pressure 110 mm. Tongue coated and breath foul. The entire abdomen was tender on pressure. X-ray examination showed a decided gastroenteroptosis. Rovsing's operation was performed August 27, 1918. Recovery was prompt. A letter from her a few months ago informed me that she had gained considerably in weight and felt better than she had for years.

Case 3. Miss C., aged 44 years, clerk, complains of loss of weight, weakness and constipation. Nervousness and insomnia were prominent symptoms as was a dragging sensation in the abdomen. She said that when she took cathartics or an enema, nausea and pain in the abdomen would immediately ensue. It required large doses of salts or castor oil to move her bowels, and for several years she had been in the habit of taking daily enemas in order to get complete evacuation. A thorough physical examination, assisted by the x-ray, gave undoubted evidence of a pronounced ptosis of the stomach and transverse colon. Operation was done in September, 1918, and was followed by a satisfactory recovery.

Case 4. Miss J. McG., aged 24 years, stenographer, has been in delicate health since the age of puberty. Complains of pain over the entire abdomen and tenderness in the pelvic region. Is never free of backache and tires on slightest exertion. Was obliged to give up her work two years ago, and spends a great deal of time lying down. Has suffered from severe constipation ever since she can remember. Had large ovarian cyst removed four years ago after which gastro-intestinal symptoms and nervousness grew

worse. Physical examination: Tall slender girl, decidedly emaciated. Long narrow thorax with sloping ribs, floating tenth rib, thin relaxed abdominal wall. Walks slowly and in a stooped position. Excessive hair growth on legs and arms. Skin dry and covered with fine scales. Abdomen tender and sensitive to pressure. Tonsils hypertrophied, and pyorrhea present. Heart and lungs negative, urine negative, gastric analysis showed high acidity. X-ray examination showed an extreme sagging of the stomach and transverse colon, with visible appendix.

Gastropexy was performed March 11, 1919, Rovsing's method being employed. The appendix and a moderately large cyst of the remaining ovary were removed at the same time. Although the symptoms referable to the ptosis were relieved, her general condition did not show the improvement hoped for until recently, and now she is gradually improving.

Case 5. Mrs. W. H., aged 42 years, housewife, primipara, complains of pain in back and pelvic regions, headache and dizziness, becomes exhausted easily. Has considerable discomfort in abdomen after eating and has suffered from obstinate constipation for years. Very nervous and despondent. Says riding in car or on train increases nausea and pain. Physical examination: Thin, delicate, long-waisted individual, with relaxed abdominal wall. Heart and lungs normal. Blood analysis negative, trace of sugar in the urine, no albumin present. Kidneys palpable but not prolapsed. Pulse and temperature normal. Radiograph shows stomach and colon deep in pelvis. Stomach greatly elongated. Meal left stomach in four hours. Good motility. Operation performed July 6, 1920, and stomach and colon suspended by Rovsing's method. No untoward symptoms followed operation. Improvement of all symptoms were gradual but continuous. Has gained 18 pounds in weight, bowels act regularly without purgatives and all digestive disturbances have been relieved.

Case 6. F. B., aged 26 years, single, farmer, ex-service man, complains of loss of weight and strength, dragging down feeling in abdomen, backache, and pain in hips and thighs, also pain and tenderness in left iliac region, and nervousness, nausea, and constipation. Would become exhausted after slightest exercise. Had a mild convulsion at one time after severe exertion. Had been operated on five years previously for strabismus, and had a tonsillectomy performed about the same time. An appendectomy was done about a year afterwards. Physical examination showed nothing abnormal in thoracic cavity. Blood count showed slight diminution in red and increase in white blood cells. Hemoglobin 70 per cent. Trace of sugar in urine. Gastric analysis showed low acidity. Wassermann negative. X-ray examination after barium meal showed the unmistakable signs of gastrocloptosis. There was an acute angulation of the splenic flexure and some dilatation of the ascending and transverse colon, with spastic descending colon and sigmoid. Stomach was slightly dilated. Part of meal was retained after six hours.

Gastropepy after Rovsing's method was done August 19, 1920. Immediate convalescence, uninterrupted except for protracted vomiting for three days, which was relieved by gastric lavage. Marked improvement in abdominal symptoms followed and the patient gained 25 pounds in three months. Nervous symptoms and pain in back and hips has not been relieved to date. Fluoroscopic examination of this case was made eight months after the operation and showed stomach and colon in good position.

Case 7. Miss C. D., aged 20 years, schoolgirl, has had poor health since early childhood. Had measles and whooping cough in seventh year. Menstruated at 13. This has always been regular and painless. Has had spells of tonsillitis since early childhood. Tonsillectomy and appendectomy were performed several months ago. Three years ago she began to have pain in the right iliac and left kidney regions. Has gradually lost flesh and tires easily. Suffers from severe constipation, and appetite is poor. Physical examination showed negative findings except for symptoms of Glenard's disease. An abdominal supporter was worn for several months without benefit. Patient was operated on October 11, 1920, using Rovsing's method, and nephrorraphy of left kidney was done at the same time. Complete relief of all symptoms followed the operation with a very satisfactory gain in weight and general health.

Case 8. Mrs. H. C., aged 38 years, housewife, has been an invalid for about ten years, and has spent most of her time in bed. Said she could not stand or walk without great discomfort in her abdomen, and pain in her back and hips. These symptoms were so severe at times as to cause fainting. She had always suffered from constipation, and frequently had digestive disturbances accompanied by headache and dizziness. Nausea was a common symptom, and although she found it difficult to vomit, eructations of food and gas was quite the rule, unless she was extremely careful about her diet. Physical examination was negative except for the usual symptoms of gastrocloptosis, and there was slight enlargement of the thyroid. Examination with the x-ray demonstrated that the stomach and transverse colon rested deep in the pelvic cavity. Operation was performed (Rovsing's method) November 18, 1920. Patient improved rapidly, and made a trip to Southern Texas seven weeks after the operation was done. I have recently heard indirectly that she is gradually improving in general health and gaining weight, and her abdominal symptoms are relieved.

Cases 9 and 10. These were operated on by Beyea's method with results as reported in the text of my paper.

DISCUSSION

(Abstract)

Dr. B. D. Baird, Galesburg, tries to base his treatment on the findings as shown by the screen or radiograph. Cases where the colon is ptosed into the pelvis from which it was impossible to lift it will not be benefited by the application of a pad or any other

external abdominal support. In such cases he has been doing a coloepexy allowing the stomach to take care of itself because he had not found a case in which the stomach could not be lifted by external pressure. The coloepexy is done by simply attaching the mesocolon to the posterior abdominal wall and then putting the patient to bed with the foot of the bed elevated so all the viscera will work up toward the diaphragm. Before allowing them to change from this position we apply a pad with the abdominal pressure below. We are glad to say that so far our results appear to be satisfactory, but unless they wear a pad constantly we feel quite sure that the condition will recur.

Dr. Edward Louis Heintz, Chicago, is opposed to surgical intervention in visceroptosis, believing that if you bring one group of organs into position by surgical treatment, you will have a visceroptosis of another group. He offered the following method of treatment: Administer a barium meal and take an x-ray picture to determine the location of stomach, transverse colon, etc. Then stand the patient on his hands, inverted. It is necessary for the patient to have confidence in the attendants. He must relax his abdominal muscles and permit the abdominal viscera to fall toward the diaphragm. Then put him back on the table and take another picture. If the viscus has moved toward the diaphragm he will probably prove amenable to this treatment. Then put him to bed and give him hand-walking exercises twice a day. At the end of a week an abdominal support is applied. This particular abdominal support has seven stays, one in the midline extending from the pubis nearly to the umbilicus and three pairs arranged bilaterally and symmetrically, the first pair at an angle of about 10°, the second at an angle of about 15°, and the third reaching up to the iliac crests. After about a week the patient is permitted to be up part of the time. After three weeks he is up all day. We give five small meals a day, never overloading the stomach. These patients are usually very thin and by this method we can put on 15 to 20 pounds in the course of six months.

Dr. J. L. Wiggins, East St. Louis, wondered whether we grasp fully the causative factor of gastropotosis and whether this condition could not be relieved by simple means if we directed our attention to the ptosis and did not go so deeply into the so-called possibilities in the correction of this condition.

Of several cases of enteroptosis that consulted him the most marked case was that which came from the Norwegian Hospital at Seattle. The young man had drifted from draft board to draft board, trying to pass the examination. He presented a beautiful picture of gastropotosis. He had been kept for ten weeks with the foot of the bed elevated about 25 degrees and during that time he had vomited, which showed a neurotic element in the case. On examining he discovered that the patient had an unrecognized umbilical hernia. He suggested that the man could be relieved and possibly cured by placing an adhesive strap across the umbilicus, infolding it in the same

manner as Coley does for the umbilical hernia in children. His associate agreed that it was worthy of trial. This man had been practically in the human scrap-heap for four years. After the application of the adhesive strap he passed the examination into the Draft Army and later in the Regular Army. The adhesive plaster must be applied in a certain way, otherwise it is not efficacious, namely, holding the umbilicus in and making an obturator of the rectus muscle.

In the last ten years 42 cases have passed under observation that have been relieved by this method. It is simple and in selected cases extremely efficacious. It does not meet with more general application on account of its simplicity. The 42 cases that were sent to me for operation or for diagnosis have been relieved by this simple method and I do not know how many other cases there are walking around through the country that could be benefited by these simple measures.

Dr. James A. Day, Springfield (closing): I do not think there is very much that I can add. I tried to cover the subject in my paper. Of course, we all know that there has always been and probably always will be a great difference of opinion on this subject. I can remember what a time we had fighting out the question of appendicitis as to whether it was a medical or a surgical disease. Visceroptosis is considered a non-surgical condition by the majority of the profession, but still there are many able men who do not believe that way. They believe that many cases are amenable to cure by surgical means. It has always seemed to me very inconsistent when we read the text-books and see the arguments brought to bear against surgery of visceroptosis, for these men will invariably tell you all kinds of ways to keep the organs up—diet, bands, pads, supports, postural treatment, etc., which give only temporary relief, and at the same time they will turn right around and say it does not do any good to replace them by operation. Of course, their idea is that these patients are helpless degenerates to start out with, and we might just as well throw them in the scrap heap, and be done with them, as there is no use trying to do anything for them. If we do not do any more than to make these people more comfortable, we have accomplished something. If it is displacement of the organs that is causing the functional disturbance, certainly the replacement of the organs will benefit the patient. For that reason I am strongly in favor of surgical procedure in the treatment of these cases rather than first resorting to all sorts of make-shifts and finally doing surgery.

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SAFETY-FIRST IN ANESTHESIA*

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Recent advances in surgery have very materially broadened the field of the operator and anesthetist and have introduced the necessity of handling a far greater proportion of *poor risks*. At present it is not at all unusual for even the occasional operator and anesthetist to encounter patients with goiter, tuberculosis, heart, kidney and liver disease, chest complications and varying degrees of sepsis, anemia and toxemia.

Because fatalities still occur with undiminished regularity, under both general and local anesthesia, even in the practice of the most experienced surgeons and anesthetists, it becomes vitally necessary to formulate some routine plan by means of which not only the patient's fitness to take an anesthetic may be determined in advance, but also, and more especially how anesthesia may be given with the utmost safety to such hazardous risks.

From a study of all available data it is my personal opinion that the present death rate under anesthesia in the chair, on the table and from by-effects within 72 hours after operation, is one in every 250 administrations, irrespective of the methods or agents used. This is a prohibitive mortality and that is why one of the first efforts of the National Anesthesia Research Society has become a safety-first campaign in anesthesia, based on a safety-first chart.

THE N. A. R. S. SAFETY-FIRST CAMPAIGN IN ANESTHESIA.

For some years the matter of keeping anesthesia records has been agitated and the N. A. R. S. chart has been based upon the following suggestions of the Dean of American Surgery, W. W. Keen:

. . . An anesthesia chart should be kept in every case, even for a brief etherization. A chart

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tends to concentrate the attention of the anesthetist upon his job and make him more careful. In a few years such charts would also furnish very valuable and extensive statistics. The form should be full enough to make it valuable and to compel the average anesthetist to make close and continuous observation, yet not so elaborate and detailed as to defeat its own object. . . .

Prior to operation the anesthetist as well as the surgeon should make himself familiar with the condition of the heart, kidneys, blood pressure, hemoglobin index and any unusual condition; should see that the mouth, teeth and tonsils are in proper condition and that provision be made to prevent chilling of the patient. During the operation the anesthetist should keep himself constantly informed as to the general condition of the patient by observation of the respiration, the most important function of all, the blood pressure, pulse, pupil, color and condition of the skin as to sweating.

CLASSIFICATION OF SURGICAL AND ANESTHETIC RISKS.

The most important thing on the safety-first chart in respect to obviating preventable deaths is the requirement for ascertaining the surgical and hence also the anesthetic risk, prior to operation.

The advisability of this requirement has been questioned by the legal advisers of a state medical association, providing medical defense, on the ground that "*determining the surgical risk involves too much legal responsibility.*" But this is exactly the sort of responsibility that is being advocated in the safety-first campaign, aside from any consideration of the *moral responsibility* involved.

In the present advanced state of surgical and anesthetic knowledge the patient has a right to expect a fairly exact preoperative diagnosis and a very exact preoperative prognosis. Skill in prognosis can only be gained by experience. The surgeons and anesthetists who make and record preoperative prognoses and check them up with their results, will soon learn that the patient's physio-pathological condition or reserve vitality is the paramount factor in recovery.

A. H. Miller, of Providence, R. I., one of the committee who drafted the N. A. R. S. chart, has classified operative surgical risks as follows:

A. Good Risks: Patients free from organic disease, whose surgical condition is not likely to prove fatal.

B. Fair Risks: Patients suffering from or-

ganic disease, whose surgical condition is not especially serious.

C. Poor Risks: Patients whose surgical condition is so serious or so far advanced as likely to result in fatality.

Evaluating the surgical risk of each and every patient coming to operation will do more than anything else to eradicate that remaining stigma of surgery, "*the operation was a success, but the patient died.*"

FACTORS DETERMINING SURGICAL AND ANESTHETIC RISKS.

You will note that the safety-first chart lays especial stress on blood-pressure readings. Miller considers blood-pressure guides the most valuable means at our disposal for making a preoperative prognosis and for judging the condition of the patient during operation. It may uncover arteriosclerosis, nephritis, myocarditis, aortic insufficiency or mitral stenosis. It registers the ability of patients to withstand hemorrhage, the depression of the anesthetic and surgical trauma. During the operation, 5-minute readings of the blood pressures provide the most valuable information that patients are still in a zone of safety, and give due warning of the insidious onset of circulatory depression or shock.

C. W. Moots, of Toledo, Ohio, has formulated a rule for determining the vital circulatory reserve of patients by preoperative blood-pressure tests. His rule may be stated as follows:

The pressure ratio, a fraction having the pulse pressure as numerator and the diastolic pressure as denominator, may be normal between 40 and 60 per cent. If the ratio is high or low there is reason to apprehend danger. If the ratio lies between 25 and 75 per cent, the case is *probably operable*; if outside these limits it is *probably inoperable*.

In checking-up the accuracy of this rule in a series of 1,000 cases, Miller found that in the operable risks 3.23 per cent. of the patients died and in the inoperable risks 23.07 per cent. of the patients died—a difference of over 20 per cent. in the mortality rate.

The increased death rate from circulatory depression during operation is even more startling.

E. I. McKesson, of Toledo, Ohio, has formulated the following rule as an important guide in determining the onset of shock under anesthesia.

With a pulse rate of 120 or more, a pulse pressure of 20 mm. or less and a diastolic pressure of 80 mm. or less in a patient, who at the beginning of the operation had presented normal pressures, frank shock has

occurred. If these low pressures are continued, without improvement, for more than half an hour, a vicious circle is generally established, which, without treatment, will cause the death of a patient.

In checking-up the accuracy of this rule in 1,000 cases studied, Miller found that in patients who were within the danger zone, as determined by this rule, for more than 25 minutes, the mortality rate was 69.23 per cent. This is what might be called a solar plexus surgical fact.

On account of the importance of this matter and to standardize surgeons' and anesthetists' conception of circulatory depression, the following three degrees, established by Moots and McKesson, have been accepted by the National Anesthesia Research Society and included in the safety-first chart.

These degrees of circulatory depression are:

1. *Safe*: Ten to 15 per cent. increase in pulse rate, without change in pressure. Ten to 15 per cent decrease in pulse pressure, without change in pulse rate.

2. *Dangerous*: Fifteen to 25 per cent. increase in pulse rate with 15 to 25 per cent. decrease in blood pressure.

3. *Fatal*: Progressively increasing pulse rate above 100, with progressively falling blood pressure of 80 mm. or less systolic, and 20 mm. or less pulse pressure, for more than 20 minutes.

Over 100,000 copies of the safety-first charts have already been distributed at cost to hospitals, surgeons and anesthetists in the United States and Canada, and it is of interest to note a rapid change in methods of anesthesia and a revision of surgical technique in those clinics, in which the checking-up of circulatory depression has pointed the explanatory and warning signal for bad postoperative results.

Very recently McKesson has evolved a method determining inoperable risks in the most doubtful cases, based on blood-pressure reactions to primary and secondary nitrous oxid saturation with reoxygenation.

Primary and secondary nitrous oxid saturation at one phase increase the pulse rate and immediately following decrease the pulse rate and blood pressures. When oxygen reaches the blood stream a moment later the pulse and blood pressures immediately return to their former readings. This is the normal response to saturation and reoxygenation.

Now in the most hazardous risks there is cir-

culatory depression of a more or less serious degree to begin with, and the effects of primary saturation, followed by a breath or two of oxygen, may show an increased circulatory depression, lasting for from 3 to 5 minutes, which contraindicates any but extremely short and simple operative procedures.

In very hazardous risks, requiring an abdominal or other major operation, a more searching test is needed. If the patient reacts favorably to primary saturation, this is followed by secondary saturation, while the effects on the pulse and blood relations are noted from 3 to 5 minutes after oxygen is administered. If the pulse is increased as much as 25 per cent. and the pulse pressures are decreased 25 per cent or more (second degree depression) the patient who, while inhaling oxygen, is unable to compensate within 5 minutes, may be regarded as inoperable for major surgery in the hands of even the best surgical team.

In all instances in which this test has been used by McKesson, R. M. Waters, of Sioux City, Ia., and others, patients who did not react favorably and were denied operation, have died very promptly of their surgical condition and its complications.

THE BREATH-HOLDING TEST AND FITNESS FOR OPERATION.

A second, invaluable and perhaps even more practical method of determining surgical risk and fitness for operation is the breath-holding test. A consideration of this test involves the underlying physio-pathology of anoxemia, acidosis, apnea and acapnia.

The supply of oxygen to the tissues is a very vital thing, for a patient may go for weeks without food, days without water, but only for seconds without oxygen.

In 1914, Stange, of Petrograd, brought forward the breath-holding test as the best indication of the patient's myocardial reserve for withstanding operation under general anesthesia.

In use this test is simplicity itself. The patient, sitting at ease, takes a deep breath, closes the mouth and pinches the nostrils; and while the patient holds the breath the passing seconds are counted by the watch. If there is any doubt as to the exact breath-holding capacity of the patient, the test may be made more severe by evaluating several breath holdings in succession. Nor-

mal persons can usually hold their breath from 35 to 45 seconds, the latter figure being the minimum standard for the French aviation service. Ability to hold the breath from 25 to 35 seconds usually means *mild acidosis* and a decrease of the duration of the apnoeic pause below 20 seconds means *severer acidosis* and raises the question of inoperability, except under local anesthesia with every possible safeguard, or under general anesthesia with excess oxygenation.

While Stange seems to have had no suspicion that the respiratory test was based on an apnea due to acidosis, nevertheless he reported observations on a number of chronic diseases, in which he found the duration of voluntary apnea to be shortened in about the degree in which acidosis is known to occur, from the results of others, notably Yandell Henderson.

BODILY REACTIONS TO LOW TENSIONS OF OXYGEN.

For all practical purposes the duration of breath holding is controlled by lowered oxygen or increased carbon dioxid tension in the blood and tissues. The studies of Lutz, Gregg and Schneider, in the aviation service at Mineola, have added a great deal of valuable information to the subject of bodily reactions under low tensions of oxygen, that is of pertinent importance to surgeons and anesthetists in connection with the increased surgical risk of patients with a shortened breath-holding test.

The response of the aviator to a decreasing supply of oxygen has been tested by experiments lasting about the same length of time as major operations—from 25 to 145 minutes. Three methods of oxygen variation have been employed:

First, a breathing chamber in which it was possible to reduce the barometric pressure and thus duplicate the pressures and oxygen tensions of varying heights in the air.

Second, a rebreathing machine with stationary barometric pressure of sea level, which started out with ordinary air but gradually with rebreathing, the oxygen content was decreased and the carbon dioxid was absorbed with caustic potash.

Third, respired air breathed by the aviator was diluted with increasing amounts of nitrogen.

The bodily reactions resulting from the three methods of oxygen variation were the same, indicating that the difficulties in breathing, rapid pulse rate, headache, cyanosis and syncope are not due to the barometric pressure but to the diminished oxygen tension of high elevations. As the oxygen in the air inhaled is reduced the aviator is virtually elevated to

a corresponding altitude. Thus a mixture containing 20 per cent oxygen has a barometric pressure of 760 and the altitude is sea level. On the contrary 6.4 per cent oxygen means an altitude of 30,000 feet and a barometric pressure of 230.

In the aviation experiments, as the oxygen percentages were decreased almost the same symptoms were noted in the aviators as are noted by anesthetists when the oxygen content becomes insufficient during anesthesia,—that is an increase in respiratory volume and rate, an increase in pulse rate, an elevation in blood pressure and the appearance of cyanosis. There is headache and nausea as a counterpart of the same postoperative symptoms in patients who have been cyanosed during the larger part of a nitrous oxid-oxygen anesthesia.

In the aviation tests, some men compensated so easily and so well that they stood, for brief intervals, as low as 6 per cent oxygen or an altitude of 31,000 feet.

It was noted further that the respiratory and cardiac centers were ordinarily stimulated by about the same fall in oxygen pressure. In some subjects the first response began at 17.9 per cent, while the majority showed the first response between 15.5 to 16.5 per cent. This, therefore means that the average individual, when the oxygen content of the inspired mixture becomes less than 15 per cent, must put out some effort to keep metabolic processes at the proper level and it would seem that low oxygen percentages due to disease or under anesthesia would be very similar in effect to low oxygen percentages at high altitudes.

In this connection, Mary Botsford and Dorothy Wood, of San Francisco, have raised the question whether the patient to be operated on under anesthesia is able to withstand lowered oxygen tension and its results? For aviation candidates, who were supposed to be picked normal males, gave three very definite types of reaction to respiratory tests.

The optimum type showed no response until the reduced oxygen reached about 15 per cent, when there was a gradual increase in pulse, respiration and blood pressure until 7 to 6 per cent oxygen was reached, when the blood pressure, pulse and respiration started to drop and the aviators fainted, with rapid recovery following the administration of oxygen.

The second type showed response at 17.9 per cent oxygen and the compensatory reactions were excessive, pulse respirations and blood pressure went very high and collapse came at 9 to 8 per cent oxygen, with a much longer time required to recover and with severe headache for some time after.

A third type is like that seen in elderly people, in whom there may be practically no response, no rise in blood pressure, very little rise in pulse and respiratory rate. The compensatory mechanism seems to be entirely overwhelmed. The counterpart to this type is seen in patients, who are unable to have ether added to the nitrous oxid-oxygen for relaxation. These patients may become cyanosed in an effort to keep them relaxed sufficiently for operative work; but although

there is cyanosis there may be no change in pulse, respiration and blood pressure. These patients may then show postoperative myocarditis due to the insufficient amount of oxygen supplied the heart muscle during the operation.

OXYGEN NEED IN ANESTHESIA.

From the foregoing it can be seen that no person, undergoing respiratory tests, was able to stand an oxygen tension of less than 15 per cent., without the occurrence of certain definite compensatory reactions. This might be directly applied to nitrous oxid-oxygen anesthesia, to the effect that no patient should receive less than 15 per cent. oxygen, unless the condition of the heart allowed that patient to be placed in the *optimum type* already mentioned, and that no patient with any symptoms of cardio-respiratory strain should be given less than 18 per cent. oxygen, and that such a patient would be the better off for preliminary synergism with opiates and magnesium sulphate, or the addition of minimal amounts of ether for relaxation.

The shortened breath-holding test due to anoxemia may be caused by:

1. Defective charging of the arterial blood with oxygen in the lungs.
2. Slowing of the circulation.
3. A defective proportion of available hemoglobin in the blood.
4. An alteration of the dissociation curve of the oxyhemoglobin so that oxygen is less easily given off than usual.

The last cause mentioned is the least understood and Macleod's explanation is of interest:

Various factors influence the dissociation curve of oxyhemoglobin. Thus the rate is increased by a rise in the carbon dioxid pressure in the blood, by fever and by a rise in the saline contents of the plasma. On the other hand, when the carbonic acid content of the blood is lowered the hemoglobin clings to its oxygen and thus the tissues may be starved of this, even though the hemoglobin in the vicinity holds much of it.

This explains why the use of carbon dioxid (10 per cent.) with oxygen (90 per cent.) has been found, by such observers as Levi, Henderson and McCurdy, one of the most reliable resuscitative measures in circulatory depression and shock. It emphasizes the value of heat in restoring oxygen absorption as well as a similar influence of salines and blood intravenously. It also accounts for the necessity of giving oxygen by rebreathing

methods when overventilation during ether anesthesia threatens to precipitate acapnia.

In some cases of profound anemia it is difficult to produce apparent cyanosis and such patients may die from overdosage of nitrous oxid or ether without showing any warning signals, except extreme dilatation of the pupil and complete muscular collapse.

Thus the air hunger of anemias, cardiac conditions, hemorrhage and shock should be evaluated by means of the breath-holding test and the patient's oxygen need disclosed previous to operation.

OXYGEN NEED IN RELATION TO HEMORRHAGE AND SHOCK.

W. I. Jones and Clayton McPeck, of Columbus, Ohio, to determine something definite about oxygen need after hemorrhage, exsanguinated guinea pigs and found that where these animals suffered a loss of 20 per cent. of their blood content the amount of oxygen required for safe anesthesia was from 2 to 3 times greater than before bleeding; and that after 25 per cent. blood loss, the oxygen requirement was five times greater. The results of these experiments bear out those of W. B. Cannon and McKeen Cattell, of Boston, in the war zone, in which they found that shocked (exsanguinated) soldiers readily died under ether anesthesia and that nitrous oxid-oxygen did not save life unless given with enough oxygen to meet the patient's increased need. Thus in first degree circulatory depression, Cannon and Cattell found the oxygen need to be from 20 to 30 per cent.; in second degree shock from 30 to 40 per cent., and in third degree shock from 40 per cent. upward. In consequence, cases are now on record in which satisfactory nitrous oxid-oxygen anesthesia has been maintained in bad risks with upward of 60 to 80 per cent oxygen with recovery of the operated patient. In all such anesthetics the method of administration must also provide for sufficient carbon dioxid retention to avoid acapnia.

ACAPNIA AND POOR ETHERIZATION

There is always air hunger associated with lowered alkaline reserve or diseased conditions which we consider as complicated by acidosis, and in such patients the breath-holding test is also sufficiently shortened to give due warning. This is especially true in connection with chronic

kidney and liver disease, as well as septic and toxic conditions of an acute or sub-acute type. It is when such patients are etherized badly, without proper oxygenation or enough rebreathing to prevent overventilation, that we see the typical ether prostration and delayed postoperative recovery. It is this condition that Yandell Henderson has been trying to correct for 14 years. And yet the staff of a prominent Ohio hospital, on account of a pneumonia and anesthetic death, has recently tabooed rebreathing methods of etherization and has issued a ruling that oxygen may only be given with an anesthetic on direct order of the operating surgeon. Apparently members of this staff are not familiar with the work of W. D. Gatch, of Indianapolis, in restoring etherized patients to complete mental control and normal resumption of bodily functions, by 15 to 20 minutes rebreathing of oxygen after operation. Personally I consider this method superior to mere carbon dioxid stimulation, as suggested by Henderson, Haggard and Coburn, as it provides both the oxygen and carbon dioxid factors for resuscitation.

Some months ago I asked W. I. Jones, secretary of the N. A. R. S. Research Committee, to check-up on the daily run of patients, coming to his dental clinic for extractions and minor oral surgery, and in a short series of some 50 patients he found 10 whose breath-holding test marked them as very grave risks for anesthesia. In none was the breath-holding test over 25 seconds and in most of them it was under 15; and in each instance it singled out some serious underlying pathological condition. I am quite sure that an extended series of observations, in some larger surgical clinics, would give equally as surprising results among patients, now commonly accepted and operated on as good risks, as has been shown in the studies of Fitzpatrick, of Chicago, in the operative handling of toxemic parturients.

Time does not permit going into the detailed value of blood and urine chemistry as additional safety-first factors in anesthesia; but it may be held as axiomatic that if the breath-holding test is below 25 seconds, the patient has best be given every advantage of preoperative blood and urine analyses to obviate untoward catastrophes.

RELATIONS OF SURGEONS AND ANAESTHETISTS.

After 18 years of intimate contact with the development of the specialty of anesthesia, I feel

that I can very truthfully say that surgeons are coming more and more to a realization of the value of the expert medical anesthetist as a member of their surgical team. At the same time, there is an increasing effort on the part of those, specializing in anesthesia, to become as competent consultants as may be, regarding all the medical phases of the surgical wards. It is this combination of appreciation and added knowledge that will eventually make the coming era of physiological anesthesia and surgery the safest and most comfortable for those who must undergo the ordeal of an operative procedure.

While this heaven is working wonders within the profession, there are a few who are still obstructing its full measure of success; and it may interest you to know that the public is finally beginning to question why?

The following letters will explain the situation better than anything else I could say, especially as they are pertinent to the present meeting of railway surgeons in Chicago and the unrest of the five brotherhoods and other unions of railroad workers:

UNITED STATES RAILROAD ADMINISTRATION.

Director General of Railroads.

..... Railroad

Chicago, January 12, 1920.

Dr.,

District Surgeon.

Dear Doctor: Replying to your favor of the 7th inst. with reference to the case of P. G., coal heaver, with special reference to bill of \$25 presented for anesthetic services, will say that at no place along the lines of this company is it necessary to pay more than \$5 or \$10, which we consider a reasonable fee for an anesthetic.

It is not necessary to use gas anesthesia for our cases or to have a specialist, as we feel you can obtain the services of some young physician, who is perhaps anxious to earn a fee.

I wish you to advise me with reference to this matter and ascertain as to Dr. willingness to show special consideration for service rendered.

Yours truly,

(Signed),

Chief Surgeon.

January 15, 1920.

Chief Surgeon,

..... Railroad,

Chicago, Ill.

My dear Doctor: I am writing in answer to your letter of January 12 to Dr. (File

No. 26781), case of P. G., copy of which Dr. handed me this morning.

Your statement, "It is not necessary to use the services of a specialist in anesthesia for your cases," I hope does not mean what you say. I realize that it may be difficult for you to allow a bill of \$25 for anesthesia.

However, it seems to me that a poor dago, with both feet crushed and a skull fractured, deserves a chance for his life as well as a bank president. Had a careless anesthetic been given P.... in the condition in which I found him during his double amputation, I don't think I am wrong in the opinion that his death would have occurred within 48 hours.

But that is neither here nor there. If your red tape makes it impossible to recognize the bill, be sure there will be no hard feelings on my part. I shall be glad to make the man a present of the amount of nitrous oxid-oxygen used, together with my service.

With a repetition of the hope that you did not mean what your letter states in regard to the need for expert anesthesia in some of your cases, I am,

Very sincerely yours,
(Signed), M. D.

This correspondence has come before the Supreme Grievance Committee of the Five Brotherhoods of Railway Workers and many of their constituent bodies are inquiring why it is that a man's life is not worth \$25; and why with safety-first on the roads and in the shops, injured railroad employees are not receiving the protection of safety-first in the operation room when under anesthesia?

If we do not ourselves conscientiously answer this question, raised by the P..... case, it will be answered for us from the outside, and I trust you will not be too surprised when I tell you that already some of the largest labor unions in the country have organized the Workers Health Bureau, to provide expert medical and surgical service for their members, if it can be procured in no other way; and they mean to pay the price that is commensurate with the quality of service rendered.

I thank you for the honor of addressing you and if I have been able to arouse your interest in extending the safety-first movement in anesthesia and secured your co-operation for preventing avoidable death, I have more than accomplished my purpose in being with you.

Stop 83, Lake Shore Road.

AN ANESTHETIC FOR OPHTHALMIC
USE.

HARRY S. GRADLE, M. D.,
CHICAGO.

To all practical intents, the use of anesthesia in ophthalmology dates from the discovery of the anesthetic powers of cocaine by Koller in 1884. That drug has never been replaced, although innumerable substitutes have been found and employed. But each has some one or more drawbacks which, in the final analysis, more than overbalance the advantages that they may possess over cocaine. The objections to cocaine for local ophthalmic use may be summed up briefly as follows:

1. Slowness of action.
2. Toxicity.
3. Dilatation of the pupil.
4. Dehydration or drying of the corneal epithelium.

About one year ago, a synthetic anesthetic was placed in my hands for experimental use. It was a para - amino - benzoyl - dibutyl-amino-propanol-succinate and was given the temporary name of "Anesthetic H." It was later found not sufficiently soluble or stable, and was replaced by the sulphate, in which these two objectionable features were eliminated. This synthetic compound was given the proprietary name of Butyn.

Cocaine and holocaine are about equal in the rapidity of action in equal concentration of solution. Consequently holocaine was used as a comparison for Butyn in the following manner: One drop of solution was instilled into the conjunctival sac and the lacrimal passages closed with the finger for ten seconds. The perception of the cornea was tested every subsequent ten seconds; first, by touching the pupillary area of the cornea with a wisp of cotton rolled to a point; and, second, after the cornea was anesthetic to the touch of the cotton, by touching the pupillary area of the cornea with the flat of a smooth spatula (a grosser form of insult). One per cent. Butyn was used in the right eye and 1 per cent. holocaine in the left eye.

	Dr. C.	Miss L.	Miss R.	Average
	Butyn Holo.	Butyn Holo.	Butyn Holo.	Butyn Holo.
Seconds elapsed before cotton touch was no longer felt...	35	70	38	60
Seconds elapsed before spatula touch was no longer felt...	80	160	100	173.3

From these simple experiments it can be seen that Butyn is about twice as rapid as an equally concentrated solution of holocaine in the production of superficial corneal anesthesia. The first noticeable anesthetic effect appeared in about 35 seconds. This is, of course, insufficient for clinical purposes; but the profoundness of the insensibility increases rapidly, so that in approximately 60 seconds after the first instillation, there is sufficient anesthesia of the cornea to permit of the removal of a superficial foreign body. In about 120 seconds after the instillation, a foreign body that has penetrated the corneal epithelium may be removed without sensation, provided the eye is not so irritable that the effects of the anesthetic are retarded. If a deeper anesthesia is required, a second drop may be instilled at this time and two minutes later a third drop. With Butyn as well as all other anesthetics, the action is retarded by local hyperemia and irritation and it is frequently necessary to use double the amount that in a normal eye would suffice. The penetration of the anesthetic may be increased by the additional use of a small amount of 1-10000 adrenalin, although the rapidity of action is not influenced thereby.

The duration of the anesthesia is dependent upon so many varied factors, especially the subjective phase, that experimental work does not yield true results. From clinical experience, it may be said that the anesthetic effect of Butyn lasts about twenty minutes after instillation of the last drop. The size of the drop instilled, the amount that remains in the conjunctival sac following the usual tight closure of the lids, the dilution by the flow of tears, the amount of oily secretion covering the conjunctiva and cornea which has to be penetrated by the drug, the degree of hyperemia of the conjunctival vessels, all of these factors influence not only the duration of the anesthesia, but also the rapidity of action.

The depth of anesthesia cannot be measured, either experimentally or upon patients. This is a factor of the penetrating power of the drug and of the absorbing power of the ocular tissues.

The toxicity of Butyn is about the same as that of cocaine. This has been proven on animals by the experimental laboratory of the manufacturers, whose figures do not belong in this article. I have never observed any toxic effects and have had no complaints from patients of dry throat, ex-

citability, etc., as occasionally follows the use of cocaine. But I have not had occasion to use Butyn upon a patient with a cocaine idiosyncrasy.

The use of Butyn produces a slight sensation of smarting, somewhat less than that of a fresh solution of cocaine and markedly less than that produced by holocaine. The sensation disappears within 30 seconds, coincidental with the beginning of the surface anesthesia. At no time has irritation of the eye (conjunctival hyperemia) followed the instillation of Butyn in any concentration, even up to 20 per cent. strength.

One of the disadvantages of cocaine is the possible increase in intra-ocular tension in eyes so predisposed, probably due to dilatation of the pupil. Butyn has no effect upon the pupil or upon the accommodation of the eye, nor does it influence the tension, either normal or pathological. A reference to the cases in which the tonometer recorded normal as well as increased intra-ocular tension shows that the use of Butyn is entirely without effect upon the pressure.

I have never observed a drying of the corneal epithelium following the use of Butyn. Take, for example, the case of Dora J., a 14-year-old girl with an adherent leucoma just above the lower limbus. For purely cosmetic purposes, I tattooed this white area, using for anesthesia three drops of 2 per cent. Butyn and one drop of 1-1000 adrenalin. The operative procedure lasted about twenty minutes and was entirely without sensation on the part of the patient. At no time during the entire operation did the cornea show any indication of dehydration, although this was carefully watched for.

Butyn has proven itself useful in the following class of cases: Foreign bodies of the cornea, operative procedure on chalazion and hordeolum, removal of conjunctival sutures, operative work on the conjunctiva and cornea, tonometry, dilatation and probing of lacrimal passages, relief of photophobia in corneal diseases, etc. To illustrate a few of the different types of cases in which Butyn has been found satisfactory, some abbreviated clinical histories are appended:

FOREIGN BODIES

R. B. O., Feb. 3, 1921. Small particle of steel rust in the upper outer quadrant of the left cornea. Two instillations of 2 per cent. Butyn at two-minute intervals. Complete anesthesia. Removal without sensation.

J. J. T., Feb. 24, 1921. Foreign body right cornea

24 hours. Marked bulbar and tarsal conjunctival injection. One drop 2 per cent. Butyn and removal in two minutes.

A. W., March 1, 1921. Small particle of coal imbedded in center of right cornea. One drop of 2 per cent. Butyn and removal with moist cotton swab within one minute.

J. R., March 29, 1921. Struck in right eye by piece of copper filing thrown from a circular saw one-half hour ago. Copper piece was lightly imbedded in the cornea at the inner margin of the pupillary area. Two drops of 2 per cent. Butyn instilled at two-minute intervals and foreign body removed with spud.

L. R., March 29, 1921. Foreign body near external limbus left cornea. One drop of 2 per cent. Butyn and removed with moist cotton swab.

J. D., April 2, 1921. Foreign body in left eye 48 hours. Eye moderately injected. Foreign body imbedded in right lower quadrant of left cornea. Three drops of 2 per cent. Butyn instilled and foreign body removed with spud. Some infiltration of cornea and marked injection.

H. F. H., April 14, 1921. Foreign body in right eye three days. Three drops of 2 per cent. Butyn instilled at two-minute intervals. Foreign body deeply imbedded and considerable loss of corneal epithelium during removal. No sensation.

Mrs. M. M. D., May 5, 1921. Foreign body right eye past two weeks. Eye considerably injected. Charred area of cornea, 1 mm. in size, 2 mm. from limbus, axis 35°. Two drops of 2 per cent. Butyn at two-minute intervals and painless curettage.

M. R., May 26, 1921. Piece of emery flew into right eye 24 hours ago. Eye moderately injected. Emery and charred cornea in lower quadrant of cornea. Two drops of 2 per cent. Butyn instilled at two-minute intervals and painless curettage of area.

W. H., July 11, 1921. Deeply imbedded foreign body in right cornea, surrounded by charred cornea. Three drops of 2 per cent. Butyn instilled and painless removal and curettage of area.

CHALAZION

L. C. C., Mar. 28, 1921. Large chalazion left lower lid. Three instillations of 2 per cent. Butyn and one of 1-1000 adrenalin. Opening and thorough curettage of chalazion without pain.

K. E., Mar. 28, 1921. Multiple small chalazion upper and lower lids of both eyes. Three instillations of 2 per cent. Butyn and one of 1-1000 adrenalin. All chalazia opened and curetted without pain.

M. D. L., Mar. 30, 1921. Very large chalazion left lower lid near inner canthus. Three instillations of 2 per cent. Butyn and one of 1-1000 adrenalin. Chalazion opened and thoroughly curetted with but slight sensation.

W. C., Mar. 31, 1921. Large chalazion left upper lid. Three instillations of 2 per cent. Butyn. Opened and curetted with practically no sensation.

I. R., April 30, 1921. Small chalazion right upper lid. Two instillations of 2 per cent. Butyn. Chalazion opened and curetted without sensation.

J. H., Aug. 5, 1921. Small chalazion right upper lid. Three instillations of 2 per cent. Butyn combined with 1-10,000 adrenalin. Chalazion opened and thoroughly curetted entirely without sensation. This was a 12-year-old child.

LACRIMAL PASSAGES

Mrs. M. J., Jan. 22, 1921. Bilateral stricture of the tear passages in the upper portion, at the bend of the canaliculus. Two drops of 2 per cent. Butyn rendered the dilatation of the puncta painless, as well as passage of the probe as far as the stricture.

Mrs. A. J., April 27, 1921. Marked argyrosis of conjunctiva and tear sac region. Lower canaliculus has been slit. Very marked stenosis in the upper portion of the tear sac and in the nasal canal. Injection of 0.1 c.c. of 2 per cent. Butyn into the tear sac by a lacrimal syringe rendered probing absolutely painless.

Mrs. R. Z., May 5, 1921. Complete stricture of the left tear passage at upper and lower ends of tear sac. Injection into the tear passage of 0.1 c.c. of 2 per cent. Butyn rendered dilatation of the upper stricture painless, but evidently none reached the lower stricture and the dilatation of that seemed painful.

Mrs. R. S., June 27, 1921. Bilateral stricture of tear passages at bend of lower canaliculus. Injection of 0.1 c.c. 2 per cent. Butyn through lower punctum rendered probing almost painless.

Mrs. A. W., Aug. 1, 1921. Partial stenosis of left lacrimal canal near upper end of sac. Injection of a few drops of 2 per cent. Butyn through the lower canaliculus rendered probing entirely painless.

Miss W., Jan. 28, 1921. Congenital atresia of upper and lower puncta of left side. Anesthesia by saturation of pledgets of cotton with 2 per cent. Butyn and direct application over closed puncta. Puncta were opened with a sharp Graefe knife entirely without sensation.

TONOMETRY

B. S., Jan. 25, 1921. Glaucoma simplex. Two instillations of 2 per cent. Butyn at two-minute intervals and then tonometer. Tension R. 26 mm., L. 45 mm.

Feb. 8, 1921. Two per cent. Butyn. Tonometric tension, R. 23 mm., L. 15 mm.

March 30, 1921. Two per cent. Butyn. Tonometric tension, R. 26 mm., L. 23 mm.

July 24, 1921. Two per cent. Butyn. Tonometric tension, R. 24 mm., L. 31 mm.

Mrs. M. M., Feb. 14, 1921. Glaucoma simplex. Right eye blind. Two instillations at two-minute intervals of 2 per cent. Butyn and then tonometer. Tension, R. 52 mm., L. 54 mm.

Feb. 18, 1921. Two per cent. Butyn. Tonometric tension, R. 40 mm., L. 30 mm.

Feb. 25, 1921. Two per cent. Butyn. Tonometric tension, R. 40 mm., L. 27 mm.

March 7, 1921. Two per cent. Butyn. Tonometric tension, R. 42 mm., L. 24 mm.

May 25, 1921. Two per cent. Butyn. Tonometric tension, R. 42 mm., L. 28 mm.

July 11, 1921. Two per cent. Butyn. Tonometric tension, R. 40 mm., L. 25 mm.

J. M. N., March 17, 1921. Bilateral glaucoma simplex. Two instillations of 2 per cent. Butyn at two-minute intervals and then tonometer. Tension R. 56 mm., L. 45 mm.

April 18, 1921. Two per cent. Butyn. Tonometric tension, R. 30 mm., L. 42 mm.

May 16, 1921. Two per cent. Butyn. Tonometric tension, R. 32 mm., L. 47 mm.

June 17, 1921. Two per cent Butyn. Tonometric tension, R. 30 mm., L. 40 mm.

Mrs. R. G., March 21, 1921. Subacute inflammatory glaucoma. Eye moderately injected. Two instillations of 2 per cent. Butyn. Tonometric tension, R. 70 mm., L. 35 mm.

March 25, 1921. Two per cent. Butyn. Tonometric tension, R. 47 mm., L. 24 mm.

April 6, 1921. Two per cent. Butyn. Tonometric tension, R. 36 mm., L. 28 mm.

April 12, 1921. Typical Smith iridectomy.

April 18, 1921. Two per cent. Butyn. Tonometric tension, R. 23 mm., L. 23 mm.

H. E. H., April 9, 1921. Herpes of the right cornea in the retrogressive stage. Eye moderately injected. One instillation of 2 per cent. Butyn and tonometer used in two minutes. Tension 35 mm.

Mrs. H. H., May 14, 1921. Acute inflammatory glaucoma of 24 hours' duration. This was the second attack within three months. The left eye had been trephined 4 years previously for the same trouble. The right eye showed the classical picture of acute inflammatory glaucoma, but without corneal anesthesia. Two drops of 2 per cent. Butyn and tonometric tension R. 63 mm., L. 22 mm. Intensive use of eserine, 1 drop of 1 per cent. solution every five minutes. Twenty minutes after the first use of the tonometer, the tension was again measured without any further use of anesthesia. Tension still registered 63 mm.

May 17, 1921. Two per cent Butyn. Tonometric tension R. 24 mm., L. 22 mm.

Mrs. L. W., June 29, 1921. Right chronic inflammatory glaucoma, with partial corneal anesthesia. One drop of 2 per cent. Butyn and tonometric tension, 50 mm. One drop of 1 per cent. eserine at ten-minute intervals for three instillations and then 1 drop of 2 per cent. Butyn and tonometric tension, 47 mm.

July 11, 1921. Iridectomy.

Aug. 3, 1921. One drop 2 per cent. Butyn, although there is no corneal anesthesia and two minutes later tonometric tension of 45 mm.

J. G. G., Aug. 1, 1921. Right glaucoma secondary to blunt trauma. Eye slightly injected. No corneal anesthesia. Two drops of 2 per cent. Butyn and tonometric tension, 32 mm., L. tension 18 mm.

Briefly summed up, the synthetic compound, known under the proprietary name of Butyn, is preferable to cocaine in equal concentration for local use in ophthalmic practice because,

1. The anesthetic effect of Butyn is about twice as rapid as that of cocaine.

2. Although the toxicity of the two drugs is

about the same, less of the synthetic compound is necessary to produce the desired effect than of the natural alkaloid.

3. Butyn does not dilate the pupil or influence the accommodation and cocaine does.

4. Butyn has no effect upon the intra-ocular tension and cocaine may have.

5. There is no drying of the corneal epithelium following the use of the synthetic preparation, as there is apt to be following the use of cocaine.

25 East Washington street.

A MODIFICATION OF THE SUBMUCOUS RESECTION OPERATION*

O. J. NOTHENBERG, M.D.

CHICAGO

The object of septal submucous operations is the removal of obstruction to nasal breathing, caused by cartilaginous and bony deviations, preserving an intact, nonperforated septum. That such a result is not infrequently difficult or even impossible may, perhaps, account for the great number and variety of septal operations that have been devised. Of all of these operations, it cannot be said that there is a single one which can be followed strictly in the correction of all the different varieties of septal deflection. It has therefore been a question of the surgeon's own ingenuity to make such modifications in the technique as would best suit the conditions in each individual case.

To minimize the difficulties of the operation, and to devise a method that will be more uniformly applicable to all varieties of deviations are the objects that this new technique, it is hoped, will accomplish. However, any operation for straightening a deflected septum is difficult at best, and requires for its successful performance great operative skill and patience.

The technique of this operation is as follows:

Local Anesthesia. This is induced by a topical application of a solution containing equal parts of a 10 per cent solution of cocaine hydrochloride and a 1 in 1,000 solution of adrenalin chloride. Two flattened pledgets of absorbent cotton, large enough to cover all of the deviated area, are immersed in the solution, and after the

*Read at the 71st annual meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

excess of fluid has been squeezed out, applied, one on each side, to the septum, and left in situ 10 minutes. At the end of that time, if no part of the septum which will constitute the field of operation has been left uncovered, perfect anesthesia and ischemia of the parts, will, as a rule, have been obtained.

An incision (Fig. 1) is made anterior to the deflection on the convex side. This incision is made in a more or less vertical direction from above downward, like the Killian incision, and so that it leaves no part of the deflection in front of it. It penetrates at once the membranes and the cartilage and stops upon reaching the perichondrium of the other side. Great care should be exercised in making this incision not to buttonhole the mucous membrane on the concave side. The tactile sense of the operator's hand

septum knife, Fig. 9.) A free elevation must be made, extending somewhat beyond the limits of deviation on all sides; in order that no adhesions may exist between the membranes and the parts of cartilage and bone to be removed, so as to obviate during the removal of the latter the danger of tearing the membranes. When this elevation has been properly performed, without impairment of the integrity of the mucoperiosteum and perichondrium of the concave side, the most difficult part of the operation has been performed. The elevated membranes having a greater vertical dimension than the hypotenuse of the angle of the deviation, thus falling away from the osseo-cartilaginous concave surface, admit of considerable space for the further introduction of instruments on that side.

The third step in operation is a horizontal in-

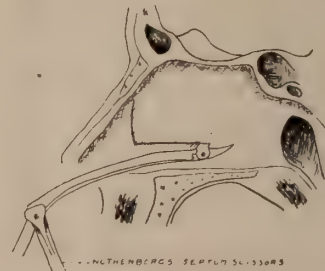
FIG. 1



FIG. 2



FIG. 3



must be relied upon to determine when the cartilage has been cut through. It is well, however, to inspect frequently the other side of the septum while this incision is being made. If a drop of blood appear on the concave side, opposite to the line of incision, it is an indication that the point of the knife has penetrated the mucous covering on that side; when care should be taken not to enlarge the cut. If the knife is held at an angle, to the septum, of 45 degrees or less, it will tend to obviate the danger of cutting through the membranes on the concave side.

The perichondrium and periosteum together with the mucous membrane are now elevated over the deflected cartilage and bone on their concave side. (Fig. 2.) Over the cartilage, mesethmoid and vomer a blunt or semi-sharp elevator with slightly curved blade and straight handle may be used. (Freer's submucous elevator, Fig. 11.) To separate the periosteum from the maxillary crest and premaxillary wing, an angular knife with a sharp edge is required. (Freer's "A"

cision below the deflection (Fig. 3). It begins at the lower end of the first incision (Fig. 1), and is carried backward, under the deviation, to a point well beyond the posterior limit of the latter. If there be a ridge or spur situated upon the lower part of the septum, such as are frequently formed by a displacement of the lower edges of the cartilage and the vomer or hypertrophy of one of the premaxillary wings, the incision should be carried well below the same. This incision includes the septal cartilage or bone, or both, as the case may be, and the respective mucoperichondrium and periosteum of the convex side. It is made through the cartilaginous part with scissors (author's septal scissors, Fig. 12) and through the bony part with a septum gouge (Ballenger's).

The mucoperichondrium-periosteum is now elevated on the convex side of the deflection. (Fig. 4.) On this side the elevation needs to be carried somewhat beyond the limits of the deviation only above and posteriorly. On the two other sides it terminates in the anterior ver-

tical and lower horizontal incisions before described.

The next step is an antero-posterior incision above the area of deviation (Fig. 5). It begins at the upper end of the anterior vertical incision (Fig. 1), and cutting through the cartilage and bone of the septum between the two mucoperichondrio-osteal layers, extends backward to a point well beyond the posterior limit of the deviation. It is made through the cartilaginous portion with swivel knife (Ballinger's), or scissors (author's septum scissors), and through the

resected with a pair of forceps and bending it slightly from side to side.

Being completely detached on all sides the deflected portion of cartilage and bone is removed and the membranous flap smoothed down and adjusted to the edges of the wound (Fig. 7).

No tight packing is needed. Absorbent cotton, wrapped in rubber tissue lubricated with sterile vaseline, is introduced on either side of the septum. It is sufficient to hold the membranes of the two sides in apposition until adhesion takes place, which rarely requires more than 24 to 48

FIG. 4

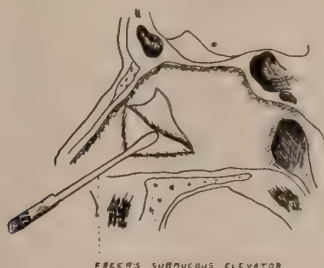


FIG. 5

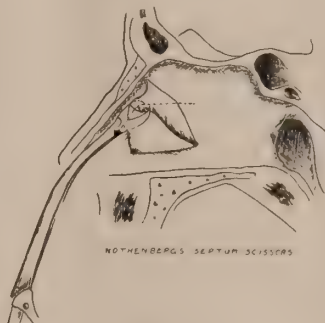


FIG. 6

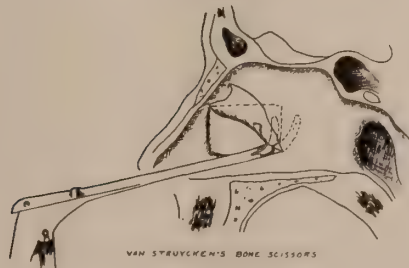
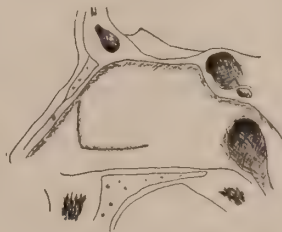


FIG. 7



bony part with a chisel (Vienna chisel, Fig. 10).

The deviated portion of cartilage and bone has now been incised on three sides, and it only remains to sever its posterior attachment to completely detach it. This is done with a pair of curved bone cutting scissors (Van Struycken's bone scissors, Fig. 13), or with a straight edged chisel, its blade slightly curved on the flat (author's septum chisel). The latter is perhaps the preferable instrument in most cases, as considerable room is required for the introduction and proper use of the scissors. If the deflection is wholly cartilaginous, the posterior incision may be made with a swivel knife. Should some narrow portion of bone be missed by the chisel in severing the posterior attachment, it can easily be broken off by seizing the part of bone to be

hours, after which the dressing may be permanently removed.

After having done a number of operations by this method, I have become convinced that it possesses some distinct advantages over the older operations.

The anterior and lower incisions, because they at once penetrate the cartilage and bone with the membranous coverings, save time, and insure a clean cut edge of the membranous flap, as well as a good coaptation of the latter because of its exact co-extension with the window remaining in the septum after the resection of the deviated cartilage and bone.

Because all incisions are made on the convex side the elevation of the membranes on both sides is greatly facilitated. On the concave side be-

cause the part of the septum in front of the incision is not in the way of the handle of the instrument. On the convex, because the anterior lower and horizontal incisions have preceded the elevation, a flap is provided, which is unattached on two sides, preventing it from being subjected to undue tension during the elevating, thus protecting it from tearing or splitting while working around large angles or spurs. Another advantage here is, that the cartilage having been incised on two sides, will give considerably under the pressure of the elevator, so that angular bends and convexities can be quite flattened out, making the

On the whole the technique of this operation is simple, and to my mind, less difficult to acquire than most others. Moreover, it can be used in most of the different varieties of deflections with equally good results.

Briefly summarized, the chief points in the operation are:

1. All incisions are made from the convex side.
2. The incisions in front of and below the deflection include at the same time the mucoperichondrium and cartilage, the mucoperiosteum and bone.

FIG. 8

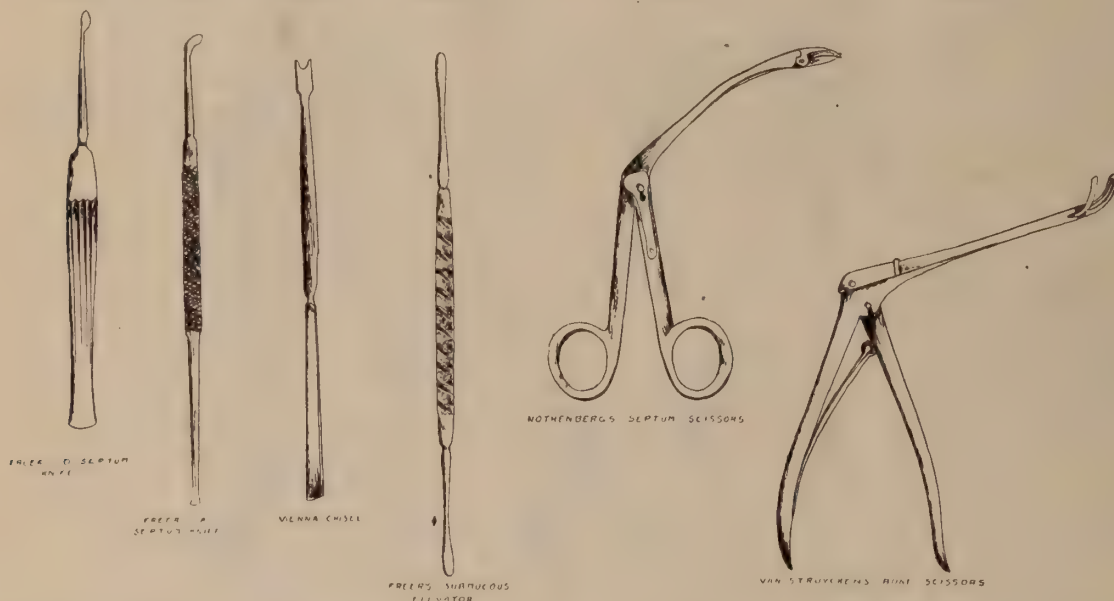
FIG. 9

FIG. 10

FIG. 11

FIG. 12

FIG. 13



separation much easier. Being an open elevation, as it were, the flap may be held to the side and the light focused directly on the line of separation, making it possible to be guided by the sense of sight as well as that of touch in doing this part of the work.

It guards against an extension of the elevation below the lower margin of the cartilagino-osseous wound.

The removal of all of the deflected portion of cartilage and bone in one piece is a material factor in shortening the time required for the operation.

It also unquestionably tends to minimize the trauma to which the tissues concerned are subject in a submucous operation, and is therefore less likely to be accompanied by shock to the patient.

3. No incision is at any time made on the concave side.

4. The elevation is always done first on the concave side.

5. The lower antero-posterior incision is made before the membranes are elevated on the convex side.

6. No biting forceps are used for removal of the deflected cartilage and bone. Incisions are made through the cartilage and bone, around the deflection, with scissors and chisels, and the resected part removed in one piece.

5614 N. Clark St.

DISCUSSION

(Abstract)

Dr. G. H. Mundt, Chicago, thought this operation will shorten the time required for submucous resection of the septum which is very important in

reducing general reaction of the patient to operation under local anesthesia.

His patient is in the recumbent or semi-recumbent posture, which is preferable to the sitting position used by many of us for all kinds of nasal operative work.

The anesthetic method used is efficient. However, he questions the advisability of introducing so large a quantity of cocaine solution in the nose, as it is in contact not alone with the septum but with the external nasal wall, giving too large an area for absorption. He prefers the use of powdered cocaine hydrochlorate on applicators dipped in epinephrin solution, 1 to 1,000, after desensitization with 4 per cent cocaine hydrochlorate solution. However, every man has the privilege of his own choice.

The one point in Dr. Nothenberg's procedure which may cause adverse criticism is the lower horizontal incision, through bone, cartilage and membrane. This, however, will give so clean an edge to the lower portion of the wound that it, by this alone, is justified. Also, it eliminates one of the most difficult parts of the ordinary submucous operations; that is, cutting down close to the floor of the nose without injuring the membrane on both sides, thereby causing permanent perforation. Also, the making of this incision is easy because one need only watch the membrane on the concave side. Also, the subsequent elevation on the convex side is greatly facilitated, as one needs only to start above and hug the cartilage and bone, and have no worry about injuring the mucous membrane below.

There is no disadvantage in the two-sided incision, as there is ample nutrition for the flap, and it is as easily dressed as with the typical vertical incision only.

Before condemning this procedure, study it well, and I am sure you will find at least some good points in it.

Dr. O. E. Fink, Danville, felt sure that the instrument illustrated would not remove a thick heavy ridge in the floor of the nose.

For anesthesia he uses a 10 per cent solution for packing the nose, packing it where the cotton encroaches on the turbinates on each side.

The submucous operation is something like the tonsil operation. Every man has a method of his own. It is pretty hard to convince anybody you have anything new on the submucous.

Dr. Thomas Faith, Chicago: In carrying out this technic, how do you manage to leave the lower part of the septum or lower anterior part, to the last, which we do so often to avoid that nasty union which may occur? Ordinarily, we attempt to take the upper part first when we have a bad ridge below. If we can go above it, we can do that at the very last moment and control our bleeding with pressure. How do you manage to get away from the bleeding?

Dr. Solomon Jones, Danville, concurred with the

last speaker in that it makes the operation easier to begin well forward, in fact, a couple of millimeters anterior to the mucodermal lining, not through the cartilage; then go back approximately four or five millimeters posterior to the first incision, go through your cartilage, first elevating the flap. It is well to begin on the side that requires the hardest work. Carry the first incision down to the floor, elevate the floor and get under your ridge or spur and dissect off attachment of membrane from edge of ridge or point of spur.

He did not agree with the essayist in reference to the anesthesia.

With a ridge or spur that comes very close to the floor where you have only about room to get a very small applicator under, it is very hard indeed to pack that nose with one large piece of cotton, to apply your anesthesia. It seems to me that the easiest method in those cases is to first spray the nose with the original solution. He uses 4 drachms of distilled water and puts in one drachm of 1 in 1,000 adrenalin, and cocaine enough to make a 4 per cent solution. You have enough adrenalin to eliminate the absorption of too much cocaine. Begin under ridge and pack well, get a half dozen strips under and up to the lower part of the middle turbinate, and then pack well above and come down to meet the lower pack below. By the time you have both sides packed, you are ready to go to work, and have good anesthesia.

Dr. John B. Morton, Decatur: The feature of going in on the convex side, does not occur to me as particularly new. My teaching has been with most submucous work to start with the convex side with the initial incision.

The point of the incision is very important and determines your working space. The objection to an incision so far back is just that. The nearer the anterior part of the nose you have your initial incision, the easier you will find it, disregarding where your deviation is. You will find it easier to insert your retractors; you will have better opportunity to remove your cartilaginous area above, thus bringing into view the septum base which in most instances should be included in the dissection.

Dr. O. J. Nothenberg, Chicago (closing): Now, as to the objection of Dr. Mundt to the anesthetic, and that will answer some of the others. When I said one pledget of cotton on each side, it does not necessarily mean more than one pledget cannot be introduced over all the area. When the deflection comes close to the turbinate, take a smaller pledget of cotton that you may be able to get underneath the angle or above it, so that you get some behind. Put another pledget in front. That, of course, must be modified according to the condition.

Now, as to the objections to this operation in large angular deflections or others, I think that if he would try this operation, and perhaps if I could demonstrate it to you gentlemen, you would find that the more difficult the case may seem, the larger the deflection, the more valuable is this operation.

You must be able to preserve the muco-perichondrium and periosteum on the concave side. That is elevated first. If you can do that, you can take out any kind of deflection, any kind of spur. If you should buttonhole the membranes, then try the plastic operation without removing any of the cartilage. You can complete this operation very nicely in case you have an accident, so long as you have not removed the cartilage. Any redundant tissue can be removed with the chisel.

As to the anesthetic, I want to say in using the solution which I have mentioned in the paper, I squeeze out the excess solution well, so that there will be no flowing of the solution in the nose from the cotton. That is, that no other part will be affected by it except that which is touched by the pledget. And that should be applied closely against the septum.

Dr. Fink did not seem to understand quite how I used this instrument. I have a pair of scissors that I usually begin the lower incision with, through the cartilaginous or soft parts. And then, if the bone is not thick, the scissors will cut the bone as well. If the scissors are not strong enough to cut the bone, I use Ballenger's septum gouge. The Vienna chisel, which is shown in the illustration, I have found very good in that incision through the bone, particularly.

Dr. Faith wanted to know how I control hemorrhage. Of course, in any of the septum operations we make the anterior vertical incision first. And so whatever hemorrhage you have from that incision in this operation you have in the others. The only difference is I go through the cartilage at once and do not elevate the membranes on that side, which gives me less hemorrhage, if anything. While I work on the concave side there is no hemorrhage except through that initial vertical incision. If there should be a little at the lower end, if you have not produced quite enough ischemia with your astringent, you can put in a pledget of cotton while you are elevating. When you are ready to go back to the convex side the bleeding has usually stopped.

In making the lower horizontal incision you do not cut any large vessels behind the lower end of the anterior incision, as a rule, that would produce such bleeding. And so I do not think it is any more difficult to control hemorrhage in this operation than in any of the others. In fact, I think I have less than in any of the others I have done.

Dr. Morton says that the incision on the convex side is not new. It is not new except in this, that in the submucous resection operation it is new going through the cartilage and bone at the same time as the membranes. It has been used in some of the plastic operations which have been done without removing the cartilage and the bone.

I think Dr. Jones said something about the anterior incision making it easier to do the operation. What I aim at and think I can do with this operation is to remove the obstruction; and I believe you

should not remove anything more than the obstruction if it is possible to do so. And you can with this operation. You can get right around a sharp spur, for instance, with it. If you have a large spur and you would try to do the submucous operation without the horizontal incision, you could not possibly get outside of that spur with a pair of biting forceps. If you tried to rotate it from side to side, it would tear the membranes with the sharp point of the spur. In extracting you might tear on both sides. You do not bite it out. You go under it and above it and behind it. When thoroughly loosened up you extract it.

RETROBULBAR NEURITIS OF ETHMO-SPHENOIDAL ORIGIN*

WILLIAM G. REEDER, M. D.,

CHICAGO.

Retrobulbar neuritis is "a disease that is localized in the orbital division of the nerve" (Fuchs); "inflammation back of the entrance of the central artery of the retina into the nerve trunk" (Collins); "the most characteristic symptom of which is a central scotoma" (Birch-Hirschfeld).

A number of synonyms for this term are in more or less common use; namely, orbital optic neuritis, axial optic neuritis, acute retrobulbar neuritis, etc. The disease is a clinical entity, the symptoms which differentiate it being dependent upon both the gross anatomical structure of this portion of the nerve, and upon the histological structure. If the disease involves the chiasm, hemiopic field symptoms may be added to the clinical picture. If that portion of the optic nerve lying distally to the entrance of the central artery of the retina be involved, then symptoms of neuritis intraocularis may predominate. Neither of these conditions is primary, however, but is secondary according to our definition.

Anatomy. Certain anatomical facts must be borne in mind if the pathogenesis of retrobulbar neuritis is to be understood. First, the optic nerve and part of the retina are embryologically, histologically and physiologically a part of the central nervous system—in the words of one writer (Parsons)—a lobe of the brain. The dural, arachnoidal, and pial sheaths of the brain proper, separated by lymph spaces, endothelial lined as within the cranial cavity, ensheath the nerve. The nerve fibres are devoid of the sheath

*Read at the 71st annual meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

of Schwann and the interstitial substance is neuroglia. Hence diseases which primarily affect the central nervous system may involve this lobe of the brain, and as in the case of multiple sclerosis, eye symptoms may antedate the other symptoms by years. The fibres are the neuroxones of the cells comprising the ganglion layer of the retina, together with the centrifugal fibres, which Parsons ventures are more numerous than has been commonly supposed. Physiologically the optic nerve is a commissural nerve, an inter-brain pathway—to which the Wallerian law of degeneration does not apply. Disease may, therefore, be followed by both proximal and distal degeneration.

The retrobulbar portion of the optic nerve has a vascular system that is largely independent of that of either the intraocular or the intracranial portion of the nerve. The arterial blood arrives by the way of the pia mater. The venous blood is drained by the vena centralis posterior, leaving the nerve before the chiasm is reached and entering the cavernous sinus. Disease resulting in vascular degeneration of this portion of the nerve primarily, rarely exhibits any of the ophthalmoscopic signs of disturbed circulation in the early stages of the disease and, in fact, they may not be present at any stage of the disease.

Certain gross anatomical characteristics of the retrobulbar portion of the nerve must also be noted. The orbital portion of the optic nerve averages about 30 mm. in length. Since the central artery of the retina enters the optic nerve about 15 mm. behind the globe the length of the retrobulbar portion proper measures about 15 mm. It may be divided anatomically into two parts; the intracanalicular portion or that portion within the walls of the optic foramen and the orbital portion proper. The intracanalicular portion deserves special attention, since here the sheathes are closely adherent to each other, the dura blending with the endostium of the optic canal and the pia adhering closely to the nerve. The optic foramen also serves as the point of exit of the ophthalmic artery, which is surrounded by and separated from the nerve by the dura. Fractures involving the orbit, healing callus, or maldevelopment of the bones of the

cranium may injure the nerve or blood-vessel in this foramen.

Onodi, Berger, Tyrmann, Sluder, Hajek, Loeb, and many others have pointed out important anatomical relations in this region and have called attention to numerous significant anatomical variations from the normal which may be present. In brief, let us recite that the lamina papyracea of the ethmoid labyrinth forms the medial wall of the orbit; that the optic foramen, normally intimately related to the sphenoid cavity, may be encroached upon by invading posterior ethmoidal cells which may even enter the greater and lesser wings of the sphenoid and so completely surround the optic foramen, or render its wall paper-like in thinness. Probably upon these facts may be based the causal relation in certain cases of retrobulbar neuritis associated with nasal sinus disease.

Certain fibers of the optic nerve and their parent cells in the retina—the maculo papular bundles and the retinal elements of the macular region—seem especially susceptible to certain baneful influences, namely, certain poisons, such as tobacco and alcohol, certain toxins resulting from infections such as influenza, to pressure as in orbital tumors, and to disturbed blood supply as in vascular sclerosis. A central scotoma relative or absolute may result from the action of these agents in the presence of an otherwise quite normal field. Toxic amblyopia and retrobulbar neuritis are examples of such disturbances.

Etiology. A few years ago Langenbeck analyzed 176 cases of retrobulbar neuritis with the following results as regards etiology:

	Per Cent.
Multiple sclerosis.....	33
Suspected sclerosis.....	8
Hereditary affections.....	18
Lues	7
Nasal sinuses (posterior).....	3.5
Hemorrhage—sudden loss of blood...	3
Menstrual disturbance.....	2.5
Diabetes	2.3
Associated with pregnancy and lactation	3.4
Rheumatism	0.6
Cold	0.6
Etiology unknown.....	20

According to this analysis accessory sinus dis-

case ranks fifth in frequency as an etiological factor.

Types of Retrobulbar Neuritis. Two distinct clinical types of this disease are met with: The typical chronic type which lasts for weeks or months with remissions and acute exacerbations from time to time with fresh attacks cropping out oftentimes at long intervals. The less typical acute or fulminating type in which perception of light may be lost within a few hours or days. Toxic amblyopia, once classed as a form of chronic retrobulbar neuritis, is now looked upon as a primary degeneration of the cells of the ganglion layer of the retina.

Clinical Symptoms of Retrobulbar Neuritis of Nasal Origin. The vision. The patient may note no disturbance in vision until a relative or absolute central scotoma of some size develops and if limited to one eye even this defect may long pass unnoticed. Vision varies greatly, being 20/30 or better in cases of slight relative central scotoma and declining to 20/200 or less in the presence of an absolute central scotoma depending on its size. The pupils of the affected eye may be slightly dilated, responding sluggishly to direct but promptly to consensual reaction to light. The fundus in the early stages usually shows no changes as has been pointed out by Axenfeldt, Berger, Oliver and others, but in cases where the disease reaches the bulbar portion of the nerve by extension all gradations of the optic nerve involvement up to and including choked disc may occur according to Elsching. Later signs of atrophy appear. According to Leber following complete retrobulbar severance of the optic nerve the first ophthalmoscopic signs of atrophy appear in about 14 days, but may be delayed as late as 26 or more days. In a case of chronic retrobulbar neuritis occurring in the writer's practice ophthalmoscopic signs of optic atrophy first appeared 6 months after the onset of the eye symptoms. The pallor may be limited to the maculo-papular area of the disc or it may include the entire disc, and be out of all proportion to the degree of vision recovered; normal vision is not unusual with a markedly pale disc. The atrophy is usually of the primary optic atrophy type. The fields in retrobulbar neuritis are pathognomic. Birch-Hirschfeld was one of the first to point out that the

most characteristic sign of retrobulbar neuritis is a central scotoma for red and green, at first relative and small, which later may become large and absolute. The scotoma is circular with the macula as its center. A peri-papular scotoma or enlargement of the blind spot at first for colors and later absolute which fuses with the central scotoma, it is claimed, is constantly present. Van der Hoeve claims enlargement of the blind spot to be the earliest ocular symptom of posterior sinus disease. Kleyn claims to have found enlargement of the blind spot in 47 out of 52 cases of posterior sinus disease. Markbreiter in Onodi's clinic examined one hundred cases of posterior nasal sinus disease and in 70 the blind spot was enlarged with normal vision. One should note, however, that since enlargement of the blind spot is so constant a finding in posterior sinus disease, its presence is of value as a diagnostic symptom of retrobulbar neuritis, only in the presence of a central scotoma. The color fields are contracted, may be irregular, and may be obliterated entirely. The form field is typically unchanged. If recovery takes place the central scotoma disappears by concentrically narrowing toward the center independently of the enlarged blind spot. The scotoma may persist permanently, however. There is no retinal metamorphopsia, but subjective sensation of light may be experienced. If the chiasm becomes involved then an hemiopic scotoma is added to the picture.

Atypical fields may occur, such as a pericentral scotoma, an irregular scotoma contraction of the form field, etc.

Cases have been reported in which there was diplopia due to paresis of the third or sixth nerve. (Onodi.) Asthenopia, both muscular and accommodative, is usually present. Heterophoria is often present, usually of the exophoric type. The patient complains of neuralgic symptoms which may be of the ocular, or retrobulbar type. There may be slight exophthalmus. Pressure on the eyeball may cause pain deep in the orbit. Injection of the bulbar conjunctiva and chemosis of the lids and conjunctiva may rarely be present. In the acute or fulminating type field tests are usually unobtainable, since the disease progresses with such rapidity that perception of light is soon lost. The pupil may be slightly dilated, direct reaction to light disturbed, consensual

reaction retained while the fundus may show no changes whatever.

The Nasal Symptoms. Whatever may be the location and anatomical classification of the cell or cells responsible for the involvement of the optic nerve in retrobulbar neuritis, it is agreed, I believe, among rhinologists, that the type of nasal disease usually associated with retrobulbar neuritis is ethmo-sphenoidal disease. Dr. O. T. Freer gives the following clinical classification of ethmoidal disease:

- I. Hyperplastic ethmoiditis.
 1. Superficial or non-destructive.
 2. Deep or destructive.
- II. Suppurative ethmoiditis.
 1. Hyperplastic suppurative.
 2. Atrophic suppurative, with thickening and eburnation of cell walls.

Retrobulbar neuritis of nasal origin probably occurs usually as the result of the deep or destructive type of hyperplastic ethmoiditis.

Pathology. No case of retrobulbar neuritis of nasal origin, except tumor cases, has ever come to autopsy, hence the pathology is unknown. The report of a case of retrobulbar neuritis by Polyak, in which he described a condition of dilatation of the ethmoidal cells with polypus formation as the cause and which was very widely quoted in the literature, later came to autopsy and proved to be a case of myxo-sarcoma. Any explanation of symptoms is, therefore, based upon purely conjectural pathology. One might conceive of several ways in which the retrobulbar portion of the nerve might become involved secondarily to intranasal disease; first, by the direct extension of the inflammatory process. Second, toxins might pass through a damaged sinus wall setting up a nerve trunk disease. Third, pressure might be exerted on the nerve trunk by a cell dilated by retained secretion or polypus formation. Fourth, Hematogenous involvement of the nerve might follow sinus disease. Toxins from sinus disease may enter the general circulation and affect the optic nerve. Just how one or more of these disturbances to the retrobulbar portion of the nerve should result uniformly in the characteristic central scotoma is difficult to explain. Birch-Hirschfeld, using the Nissl method, found chromatolysis of the ganglion cells 55 hours after intracranial section of the nerve. It is not possible then that even long continued pressure on

the retrobulbar portion of the nerve fibre may cause degenerative changes to take place in the cell body, first in the highly specialized cells of the macula region, later progressing peripheralwards? These theories might seem reasonable enough were it not for the fact that recently a large number of cases have been reported in the literature in which striking cures of cases of retrobulbar neuritis promptly followed operations on perfectly healthy nasal sinuses. The observations of Hajek, whose name has been linked with the anatomy, pathology and clinical symptoms of the disease in question for years, as given in a very recent article, should commend our attention. He relates his experience in twelve cases of retrobulbar neuritis which he had watched for from seven to fifteen years. In four of the cases he operated on the ethmoids and sphenoid with negative results.

In the fifth case he opened a normal ethmoid and sphenoid in the presence of retrobulbar neuritis following which there was improvement for 1½ years; then the case became progressively worse. He doubts if the operation had any influence in this case. In the sixth case normal ethmoids and sphenoid were opened. Results were negative. After two years the case began to improve and went on to complete recovery. Seven years later the fellow eye became involved. The nose was still negative and no operation was performed on this side. Four weeks later rapid recovery took place and in a year both eyes were normal. He suggests that operation here would have appeared brilliant. The diagnosis of multiple sclerosis was made in this case two years later. He sums up his experience by saying that there is no doubt but that accessory sinus disease is an etiological factor in retrobulbar neuritis as has been proved by operation. But that the opening of normal ethmoids and sphenoids, as has been recommended and practiced, probably has no influence on the course of the disease. That the good results reported following such operative procedure is not proof of the rhinologic origin of the disease as some of his cases illustrate. The writer has under observation a case of chronic retrabulbar neuritis in a man 30 years old, closely following an attack of acute tonsillitis. Removal of the tonsils was not followed by any permanent improvement. On the other hand, the fellow eye soon afterward became in-

volved. Three months later rapid recovery to normal vision followed soon after an operation on normal ethmoids on one side. The case 18 months later still had normal vision. Who can affirm that either of these operations cured the patient?

Diagnosis. The differential diagnosis between nasal retrobulbar neuritis and other forms may be easy, difficult or impossible. The grouping of the etiological factors under five headings should be of some assistance.

Group 1. Toxic Amblyopia. The history and the small typical oval-shaped scotoma are diagnostic.

Group 2. Cases with definite nasal symptoms combined with some of the signs of orbital involvement—headache, exophthalmos, edema of the conjunctiva and lids, paresis and muscular asthenopia, combined with an enlarged blind spot.

Group 3. Cases showing other cardinal symptoms of multiple sclerosis.

Group 4. Cases giving a definite history of some other known etiological factor—heredity, injury, tower skull, lues, hemorrhage, acute infection.

Group 5. No etiological factor apparent—apt to be either multiple sclerosis or nasal in origin.

CONCLUSIONS

1. Retrobulbar neuritis is a rare disease. Cases of nasal etiology probably comprise less than 10 per cent. of the total.

2. The most constant eye finding is a central scotoma.

3. In cases of nasal etiology, deep hyperplastic ethmo-sphenoidal disease is usually present.

4. The eye symptoms are quite constant, whatever may be the etiology.

5. Cases of nasal origin usually show definite symptoms of nasal disease with signs of orbital involvement and probably an enlarged blind spot.

6. One is justified in advising an exploratory nasal operation in cases of obscure etiology.

DISCUSSION

Abstract

Dr. J. C. Beck, Chicago: The writer said the pathology is not very well known. The classification of Freer which he named shows that the pathology is known. There are definite pathologic conditions demonstrated in the sinuses. Perhaps he speaks of the pathology of the optic nerves, and not the pathology of the nasal accessory sinuses. And this pathologic process is principally what we know as non-suppurative ethmoiditis. I have seen

a number of sections made of middle turbinate bodies in these cases showing that it is not only a disturbance in the lining membrane, but in the underlying bone a non-inflammatory and degenerative process has been going on, a rarefying process in the bone—a swelling due to a rarefied condition of the bone, the same as you find in the distended middle turbinate cyst. The rest of the ethmoid labyrinth is subject to such changes. Any number of microscopic sections prove that point. So that a swelling in one of the posterior ethmoid cells or in the sphenoid region can very easily press upon that contiguous portion of the nerve, and then the pressure upon the nerve causing pressure on the blood vessels. When by operation early relief of the pressure is obtained, the patient may be cured. If that process goes on, the disturbance will recur. For example, a lady in whom this condition occurred had to be led into the reception room seven days after the onset. Dr. Putnam of South Dakota made a diagnosis of this non-suppurative sinus condition. There was nothing seen in her nose. Spinal punctures were negative. Ophthalmologic examination by Dr. E. V. L. Brown was negative. The operation advised by these gentlemen was done, and the next day the patient could recognize the individual coming into the room and she finally got a vision of 20/30. I hear that there is a recurrence of the process now after five or six years, but not to such extent as before. Probably some of the same rarefying pathological process going on.

I had recently a case referred to me by Dr. Gradle wherein this condition was present. I did not operate but treated the nose by local treatment, ichthyol and so forth in the region of the posterior ethmoid. There was a return to normal vision inside of two or three weeks. I believe that today the case is still well. That case was inflammatory. But to operate on the nose in a case of multiple sclerosis and claim a result from that, I think deserves more consideration than the subject was given by the author. Is there a laryngologist of any sort of diagnostic acumen who cannot differentiate between multiple sclerosis and the condition discussed?

Dr. Otto T. Freer, Chicago: The rarefying osteitis referred to by Dr. Beck does not occur in the type of ethmoiditis which I have called superficial hyperplastic ethmoiditis. Here polypi, seldom exuberantly, form upon the surface of the ethmoid structures, rarely in the olfactory region or upon the perpendicular plate, oftenest in the middle meatus upon the lower border of the middle turbinated body and especially underneath the middle turbinate upon the uncinate process and in the infundibulum about the outlets of the frontal and maxillary sinuses. Removal of a nest of these superficial polypi will occasionally lead directly into a suppurating maxillary antrum, and the impression gained from many of these cases is that an acute maxillary or frontal sinusitis has left the

polypi underneath the middle turbinated body as a heritage. In superficial hyperplastic ethmoiditis there are no polypi in the ethmoidal cells and the bone is not involved.

In the deep type of hyperplastic ethmoiditis the polypi form within the cells, creating absorption of their walls by pressure, the rarefying osteitis referred to by Dr. Beck. In this manner the whole lateral mass of ethmoid cells may be made to disappear, being replaced by a tightly packed mass of polypi, whose removal leaves above the turbinate a cavity whose outer wall is the lamina papyracea of the orbit, for the lamina, frail and thin as it is, never seems to become absorbed or perforated, but resists the pressure against it. In this manner, by absorption of the walls of the ethmoid cells, nature prepares the way for an easy so-called "exenteration" of the ethmoid lateral mass. The process, however, seldom goes behind the lamella of the middle turbinate of Hajek, that is the posterior attachment of the middle turbinate which separates the posterior from the anterior ethmoidal cells, the posterior cells being rarely involved.

Dr. Reeder's paper is a most important contribution and his clear and exact presentation of his subject should have great weight in neutralizing recent suggestions that in all cases of retrobulbar optic neuritis the posterior ethmoidal cells with the sphenoid sinus whether healthy or not should be surgically opened. Nothing in the pathology or history of retrobulbar neuritis justifies such haphazard surgery except the *post hoc, ergo propter hoc* reasoning that a number of cases of retrobulbar optic neuritis, that would have recovered at any rate, happened to get well in spite of a posterior ethmoidal operation upon healthy cells. Dr. Reeder has shown that the vast majority of cases of neuritis optica retrobulbaris are of nephritic, toxic and alcoholic origin, and that the prognosis in most of them is not bad, so that sudden recoveries after opening of the healthy posterior ethmoidal cells should not be credited to the operation. Opening of the posterior ethmoidal cells should only be done if there is positive evidence that they are suppurating or are otherwise diseased. Such evidence in the case of suppurating ethmoid cells is easy to obtain, as their thin walls insure external evidence in the shape of polypi, polypoid thickening or granulations, that their interior is diseased; in this way the ethmoid cells differing from the densely walled maxillary or frontal sinuses.

Dr. Thomas O. Edgar, Dixon: One case I had this past winter in which there was a right-sided retrobulbar neuritis. It was a hyperplastic posterior ethmoiditis. The posterior cells were exenterated with a result still good several months afterwards so far as the nasal condition was concerned, but with no improvement in the vision.

Dr. W. G. Reeder, Chicago (closing): As Dr. Beck has stated, the pathology of hyperplastic eth-

moiditis, which is believed to be the cause of retrobulbar neuritis in some cases, is known. But these cases do not come to autopsy; hence, the eye pathology is still unknown.

The pressure theory is plausible, although Hajek says he has seen cases of mucocele of the posterior ethmoidal cells exerting enough pressure to cause proptosis of the eyeball, yet none of the symptoms of retrobulbar neuritis were present.

In the presence of intranasal disease, surgery is often followed by brilliant results, but equally brilliant results often follow operation on healthy sinuses. It has been suggested that the vascular depletion following the intranasal operation may have a good effect regardless of the etiology of the disease. Let us remember that the disease is characterized by periods of acute exacerbation with remissions; that recovery often mysteriously and spontaneously takes place. It is difficult, therefore, to establish the therapeutic value of any form of treatment.

INTRA-CRANIAL COMPLICATIONS OF NASAL ACCESSORY SINUS DIS- EASE—A REPORT OF 16 CASES.

C. F. YERGER, M. D.

CHICAGO

While intra-cranial complications of sinusitis are fortunately relatively infrequent, yet they occur more frequently than is generally supposed, if one may judge by the paucity of the literature. With this in mind, I investigated the cases which occurred at Cook County Hospital during the past decade, i. e., from 1911 to 1920 inclusive, and as a result found 15 cases. This, together with a case seen in private practice, makes a total of 16 cases, which forms the material upon which this paper is based. No case was found that did not end fatally, a mortality of 100 per cent.

During this time, 290,000 cases were treated in Cook County Hospital, of which 390 were cases of sinusitis of both the acute and chronic varieties, making the incidence of sinusitis 0.13 per cent. The frontal sinus was involved in 187 cases or 48 per cent, the maxillary, in 147 cases or 38 per cent, the ethmoid in 48 cases or 12 per cent, and the sphenoid in nine cases or 2 per cent. The unusually high percentage (48 per cent) of frontal sinusitis is due to the fact that the majority of these cases were of the acute type in which the diagnosis was made symptomatically and without recourse to the

x-ray in about one half of the cases. A low percentage (2 per cent) of sphenoid sinusitis is to be expected and this is explained first, because it is the sinus least frequently involved and second, because of the technical difficulties in connection with its diagnosis. The latter proved to be the case in five of the nine cases, four being diagnosed at autopsy and one at operation. Of these 390 cases of sinusitis, 16 cases or 4 per cent, had intra-cranial complications. The frontal sinus was involved in nine or 56 per cent, one of which was bilateral, the ethmoid in nine or 56 per cent, the sphenoid, in five or 31 per cent and the maxillary, in two or 12 per cent. In eight or 50 per cent, more than one sinus was involved; in four or 25 per cent, the frontal and ethmoid sinuses, in two or 12 per cent the ethmoid and sphenoid, and in two or 12 per cent., the frontal, ethmoid and sphenoid.

The sinusitis cases which developed intra-cranial complications ranged in order of frequency as follows: first, the sphenoids in 55 per cent; second, the ethmoids in 19 per cent; third, the frontals in 5 per cent, and lastly the maxillary sinuses in 1 per cent; that is to say, the sphenoid sinus cases had intra-cranial complications in five out of a total of nine cases, the ethmoids cases in nine out of a total of 48 cases, the frontal sinus cases in nine out of a total of 187 cases, and the maxillary sinus cases in two out of a total of 147 cases.

The sphenoid sinus group while being found diseased less frequently than any other sinus, (2 per cent), nevertheless, gave the highest percentage (55 per cent) of intra-cranial complications. The maxillary sinus cases comprising 38 per cent of the total sinusitis cases had intra-cranial complications in only 1 per cent. The infrequency with which maxillary sinusitis is complicated by intracranial lesions is accounted for on anatomical grounds, because unlike the other three sinuses it does not come in direct communication with the floor of the cranium. When it is the cause of intra-cranial infection it does so indirectly, i. e., through the orbit or through the ethmoid. Diffuse purulent lepto-meningitis was the most frequent complication. It occurred in 14 of the 16 cases or 87.5 per cent; frontal lobe abscess, extra-dural and intra-dural abscess and pachymeningitis externa occurred once in the 16 cases or 6 per cent. No case of thrombosis of

the cavernous sinus was found. Six cases were operated upon, of which four developed meningitis, probably as a post operative complication; two of these were modified Killian operations for chronic frontal sinusitis, one an exenteration of the ethmoid, and the other an operation on the sphenoid, ethmoid, and frontal sinuses with orbital abscess.

Autopsies were performed in seven of the 16 cases. In but three cases, neither operation nor autopsy were performed.

As it is impossible in the short time at my disposal to review at length each of the 16 cases of intra-cranial complications secondary to accessory nasal sinus disease, I shall give somewhat in detail the symptoms, diagnosis and treatment of three of the cases, each a representative type of the complications enumerated.

Case 1. Ethmoid and Frontal Sinusitis, Extra and Intra-dural Abscess.

B. A., 11, 1920, male, aged 41 years, was admitted to my service at Cook County Hospital September 27, 1920. For the following history I am indebted to Dr. E. F. Slavik. Five years ago, the patient had nasal polypi removed at a clinic in Prague, on account of nasal obstruction and discharge, which was followed by relief for four years. During the past year, the nasal obstruction and discharge reappeared, the nasal obstruction becoming so great that nasal respiration was impossible.

About a week ago, the patient consulted Dr. Slavik for relief and he removed the nasal polypi. Following this, the patient had a fever of 99°-100.4°, and on the fourth day had a chill followed by a fever of 102°, after which there appeared over both frontal regions, a large diffuse swelling extending to the mid-line of the forehead. Ophthalmoscopic examination was negative. On admittance, examination showed the presence of a sinus on the forehead midway between the eye brow and scalp from which oozes yellow, creamy, non-odorous pus, which contained streptococci. The underlying area was deeply infiltrated. Over the median line, above the nose was a superficial pus pocket, which was easily emptied on pressure. The probe revealed denuded bone over the frontal bone. The scalp was edematous and tender half way back to the occiput and well past the median line on the left side. The right eyelid was swollen and edematous, keeping the eye partially closed.

Rhinoscopic examination showed operative removal of the left inferior turbinate and anterior portion of the left middle turbinate, and evidence of recent operation high on the right side. Pus was present in both middle meati. Transillumination illuminates both antra well. X-ray examination showed no evidence of a frontal sinus on either side, but an erosion of the bone was present high up on the forehead. An incision was made, opening up the sinus and super-

facial pus pocket, after which hot applications were applied. Two days later, it was noticed that patient had T. 103.8°, P. 78, R. 20., was dull mentally and irrational, holding his left hand in an athetoid spastic position or clenched with his forearm spastically flexed. Neck rigidity and hemianopsia were absent. There was deviation of both eyes to the right. Examination showed: The abdominal, epigastric, plantar and ankle clonus absent on both sides. Achilles present on the left but absent on the right. Pupillary reflexes present. The triceps and patellar reflexes were present on both sides but exaggerated on the left. A left Babinski was present.

W. B. C. 14,200; spinal fluid and blood Wassermann negative. Lumbar puncture showed clear spinal fluid but under pressure 73 cells per cu. m. m. Nonne positive, smear showed no organisms and cultures proved negative.

Operation September 29, 1920, performed by Dr. Boot, assisted by Dr. Yerger. The skull was found to be very thick over the frontal region. The left frontal sinus was absent and the right frontal sinus was rudimentary. Creamy pus escaped from under the periosteum through a minute fistula over right frontal sinus. The same kind of pus was found outside of the dura over the right frontal lobe for an area of 7 c. m. in diameter. The dura was red and granular. The brain did not pulsate. The pus was under the dura at the upper medial angle in the direction of the falx cerebri.

The patient being in a stuporous condition, the operation was done under local anesthesia, using $\frac{1}{2}$ novocain solution. A horizontal incision 14 c. m. long with its middle about 2 c. m. above the right supra-orbital notch. The right frontal sinus was opened, the dura exposed above it for an area of 7 c. m. wide, and the extra dural pus evacuated at the superior medial angle. With the brain searcher in various directions and at a depth of 3 c. m. no pus was found in the right frontal lobe. A rubber tube was inserted under the edge of the dura and gauze strips packed between the bone and dura around the wound margins.

The operative diagnosis was: 1. extra-dural abscess, right frontal region; 2. intra-dural abscess, right frontal region; 3. small fistula in anterior wall of right frontal sinus; 4. rudimentary right frontal sinus; 5. absent left frontal sinus.

The day after the operation the patient had three slight convulsions and the following day became comatose with convulsions and twitching of left side of face. Death ensued.

Case 2. Ethmoid Sinusitis, Orbital Abscess and Abscess of the Frontal Lobe.

On July 14, 1920, I saw a boy, aged four and one-half years, on account of trouble in right eye. Parents stated he had a bad cold about two weeks previous, which was followed a week later by swelling of the right eyelids. Examination showed right eye proptosed downward, forward and outward, with chemosis of the bulbar conjunctiva, oedema and redness of lids, and fixation of the eye ball. A slight in-

filtration could be palpated along the upper and inner margin of the bony orbit. There was a slight amount of pus in the right nasal chamber located anteriorly in the olfactory fissure. Temperature 99°. X-ray examination of nasal sinuses showed involvement of right ethmoid region.

On July 16, 1920, assisted by Dr. Norval Pierce I did an external ethmoid operation (right) elevating the periosteum over the orbital margin of the frontal bone. I encountered about a tablespoon full of pus which apparently had burrowed subperiosteally over the roof and inner wall of the orbit, and on elevation of the periosteum over the anterior ethmoid region a perforation through one of the anterior ethmoid cells was disclosed. The perforation was round, about 2 m. m. in diameter, and surrounded by a dark area of softened and necrotic bone, through which the mucosa of an anterior ethmoid cell protruded. Curettement of the entire ethmoid labyrinth was done and an opening established into the right nasal chamber into which a rubber drainage tube was placed. The wound was packed with Zeroform gauze and closed with two stitches. Three days later on account of a sharp rise in temperature to 101° the drains and stitches were removed.

A week after the operation the patient had generalized clonic convulsions lasting 50 minutes, the cause of which was not ascertained. The general condition was good, drainage was slight, the wound being practically healed. The subsequent course was uneventful except for an occasional fever 99°-100°. As the wound had healed and the temperature normal the patient on July 8, 1920, was allowed to go home.

About a month after his discharge from the hospital on August 7, 1920, I was called to see the patient on account of his having very severe headaches. These headaches were so severe that he would hold his head and cry out for some relief. They would occur at any time of the day or night and often would be associated with vomiting. Ophthalmoscopic examination by Dr. Goldenburg showed papilledema of both discs. On account of the probability of brain abscess being present, the patient was sent to the hospital for further observation and study. At this time he had T. 100.2°, P. 118, R. 24, W. B. C. was 8800 R. B. C. 5,200,000, Hb. 65. Spinal puncture showed increased pressure, cell count showed 52 cells per c. m. m., mostly lymphocytes, spinal Wassermann negative. On August 11, 1920, Dr. Orcutt found 5D. choked disc in both eyes and another spinal puncture showed 90 cells per c. m. m. mostly lymphocytes. No globulin, no micro-organisms, no tubercle bacilli. Another W. B. C.—10,200 cells 78 per cent p. m. m., 22 per cent monos. X-ray of head was negative for signs of brain abscess. Had been complaining of severe headaches for past week, vomiting occasionally. The temperature ranged from 98° to 101° and the pulse from 94 to 120.

Dr. Geo. W. Hall, after making several neurological examinations and finding no focal signs of brain abscess, was nevertheless convinced that the boy was

suffering from a brain abscess, secondary to sinusitis and orbital abscess which was located in the silent area of the brain and therefore not producing any focal symptoms. He advised immediate exploratory operation for possible abscess of the right frontal lobe of the cerebrum.

Operation August 15, 1920, by Dr. Alfred Lewy assisted by Drs. Sonnenschein, Goldenburg and Yerger. An L-shaped incision with the horizontal line through the line of the eye brow, connected with the vertical limb at about the mid-line. Frontal bone about the size of half-dollar was removed, $\frac{1}{8}$ inch above the supra-orbital ridge and 1 inch from mid-line. A horizontal incision $\frac{3}{4}$ inch long through the dura exposed the brain. A curved pointed forceps was inserted posteriorly and medially into the frontal lobe of the brain to the extent of 1.5 or 2 inches, when yellow greenish pus was found. A rubber drain tube was inserted into the abscess cavity and moist dressings applied. Smears and cultures taken from the pus showed staphylococci. Five days after the operation, the dressing came off, and the tube was forced out. The next day, the patient became stuporous and the tube was reinserted. The subsequent course was downward. The temperature ranged from 98° to 104°, the pulse from 96 to 140. The patient still complained of headache, had three slight convulsions and vomited twice. A peculiar masticatory movement was noticed both previous to and after the operation. The patient died September 4, 1920, twenty days after the operation.

Case 3. Sphenoid Sinusitis, Diffuse Purulent Leptomeningitis.

M. 8, 1917, girl, 13 years old, was admitted to Cook County Hospital, February 14, 1917, with the diagnosis of suspect typhoid fever. Onset five days ago, when she came from school sick. She complained of a constant frontal headache, dizziness, nausea and vomiting. The headache was worse at night.

Examination showed T. 101°, P. 88, R. 22. There was a grayish discharge from the nose and the nasopharynx. The pharynx was injected. After 12 days, the temperature became normal and the patient did not complain of anything. The case was now diagnosed as influenza. Five days later the patient complained of severe right frontal headache, the pain starting in the frontal region and radiating to occipital region, and associated with vomiting without nausea. There was no tenderness over the frontal or maxillary regions. Transillumination was negative, the left middle meatus contained pus, naso-pharyngeal discharge was present, the tonsils were hyperemic, nose and throat cultures were negative, Widal negative.

W. B. C. 28,550. All normal reflexes were present except the abdominal which was absent. Kernig negative, no nystagmus or strabismus. Two spinal punctures were made and in both the spinal fluid was turbid and under increased pressure. Cell count showed 1900 cells, mostly polymorphonuclears, globulin positive. The smear showed gram positive cocci

in the last spinal fluid, but was negative the day before when epidemic meningitis was suspected and anti-meningococci serum administered.

She continued to complain very severely of headaches and became irrational. The patient was examined thoroughly for ear or sinus atrium of infection, but nothing was found. The day before she died, another spinal puncture was made, which showed bacteria in chains, which on culture proved to be streptococci. No mention was made in the history of rigidity of the neck, which may have been present or of any pathologic reflex, ophthalmoscopic examination, or x-ray examination of the nasal sinus.

Since her entrance into the hospital the following diagnoses had been made: typhoid fever, influenza, sub-acute tonsillitis, sinusitis, epidemic cerebro-spinal meningitis and streptococci meningitis.

The autopsy showed: 1. Sub-acute streptococcal tonsillitis, 2. streptococcal sphenoidal sinusitis, 3. diffuse purulent leptomeningitis, 4. edema of brain, 5. hyperemia of pia-arachnoid of brain and cord.

Note—The pus obtained from the sphenoidal sinus and that obtained in the exudate over the brain stem contained the same strain of streptococci as was isolated in the spinal fluid before death.

CONCLUSIONS

1. Intra-cranial complications of sinusitis occur more frequently than is generally supposed. It occurred in 4 per cent of the 390 cases of sinusitis.

2. Diffuse purulent lepto-meningitis is the most frequent and most fatal complication. It occurred in 87.5 per cent of the 16 cases of intra-cranial complications.

3. Of the 16 cases in intra-cranial complications, the frontal and ethmoid sinuses were each involved in nine or 56 per cent; the sphenoid in five or 31 per cent, and the maxillary in two or 12 per cent.

4. The frequency with which a sinusitis is complicated by intra-cranial involvement was found as follows: in 55 per cent of sphenoid sinusitis, in 19 per cent of ethmoiditis, in 5 per cent of frontal sinusitis, and in 1 per cent of maxillary sinusitis.

5. The sphenoid sinus while found diseased less frequently than any other sinus (2 per cent), nevertheless gave the highest percentage (55 per cent) of intra-cranial complications.

6. While the maxillary sinus cases comprised 38 per cent of the total cases of sinusitis, it was found involved in only 1 per cent of the cases that had intra-cranial complications.

7. Of the 16 cases of intra-cranial complications four or 25 per cent may have resulted

from operation, causing a meningitis; ten or 62.5 per cent had no operation and developed a meningitis.

8. The mortality of the 16 cases of intracranial complications was 100 per cent.

25 East Washington Street.

DISCUSSION.

Dr. H. C. Ballenger, Chicago: I believe the statistics of 0.13 per cent with four per cent complications in these cases is somewhat misleading, due to the fact that in the routine examination of these cases the sinuses cannot all be diagnosed, especially the chronic form. As a result in the cases that are diagnosed you have a comparatively high percentage.

I think there is no question but what the nasal mucous membrane is a very important factor in transmission of infection to the meninges, especially in acute infections. But the sinus as a direct means of transmitting infection is less common.

The means of infection from the sinus to the cranial cavity are: First, caries of the bone, which the sphenoid is especially prone to show. This is comparatively rare. Second, infection may be transmitted through the diploe of the bone. Third, through the venous or lymphatic system. This is the most common. When we recall the anastomoses of the veins of the sinuses with the intracranial veins, we can readily understand the frequency with which intracranial complications may occur. The frontal veins anastomose with those of the longitudinal sinus; the ethmoidal veins anastomose with the veins of the dura, and also empty into the superior ophthalmic vein; the ethmoidal veins anastomose with those of the dura; and the sphenoidal veins empty into the cavernous sinus.

Gerber states that necrosis of the sinus wall with intracranial complications does not occur and that intracranial complication is always due to the circulatory system. I do not entirely agree with that. I think it is more true of the frontal sinus than any other one. The sphenoidal infections are diagnosed infrequently and the sphenoid gives rise to a greater per cent of complications. This is due to: First, the intimate relationship of the sphenoidal sinus to the base of the brain. Second, to the hidden position of the sinus at the center of the head. Third, to the frequency with which dehiscences and various other defects of the sphenoid occur.

In regard to atrium, I believe it is possible to have an indirect transmission either by way of the venous or lymphatic systems, or by means of infection through the orbital cavity, and then by way of the optic nerve to the brain, or by rupture of the orbital roof.

I believe also that most of the sinus complications are due to operating in the presence of an acute infection.

Dr. G. H. MUNDT, Chicago: I hesitate to say this, but say it again to fortify the general statement that we should not do radical procedures when there is acute exacerbation. I do not know whether it is in the paper. If it is not, it certainly should be. Dr. Ballenger brought that out in a way, and I think it should be said time and time again. We should not do it.

Dr. A. H. ANDREWS, Chicago: I was called to a distant city to see a child, perhaps six years old, who had some intracranial involvement, supposed to be from an ear which had been discharging. I was called with a view to doing a mastoid operation. When I arrived the child was dead. The attending physician asked me to hold an autopsy. I removed the calvarium and brain and found a brain abscess with meningitis at the base of the brain, just over the sphenoid. An area of necrosis in the roof of the sphenoid showed how an infection had reached the cranial cavity; and the sphenoid cavity was full of pus and granulation tissue. No examination of this child's nose had ever been made. No thought of nasal disease had been entertained. It is my impression that a great many cases of so-called idiopathic meningitis are really of nasal origin.

Dr. C. F. YERGER, Chicago (closing): In reply to Dr. Mundt's question. Of the sixteen cases of sinusitis with intracranial complications, six or 37 per cent were operated on before the onset of the intracranial complication, hence it could be inferred that possibly the complication was the result of the operation. However, ten of the sixteen cases or 63 per cent had no operation. Of the six cases that were operated on four were chronic and two were acute sinusitis; of the ten cases that had no operation, four were acute and three were chronic sinusitis; of the remainder or three cases, it was impossible to classify as acute or chronic because of the difficulty in obtaining the history, as these cases were brought to the hospital in a stuporous or comatose condition.

Intracranial complications occurred more frequently in acute ethmoiditis than in chronic ethmoiditis. This was observed in six of the acute cases as compared with three of the chronic cases of ethmoiditis, a ratio of two to one in favor of the acute cases.

The opposite, however, is true of frontal sinusitis, that is, chronic frontal sinusitis is more often associated with intracranial complications than is the acute type. Of seven cases of frontal sinusitis with intracranial complication, six cases were of the chronic type, while but one was of the acute type; a ratio of six to one in favor of the chronic type of frontal sinusitis.

In two of the sixteen cases there were associated both middle ear infection and sinusitis and in seven cases there were multiple sinusites.

TIME AS AN ELEMENT IN TESTING VISUAL ACUITY

SOL ROSENBLATT, M. D.,

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Snellen's test type charts are in rather common use, and being based on a visual angle of five minutes for the entire letter, and one minute for the various parts making up the letter, we have arrived at an arbitrary standard for testing vision so far as size and form are concerned, with distance as the complement. But what about the question of time? How long should a man be expected to look at a test chart before recognizing the individual letters? The time generally given varies with the patience of the oculist and the patient, as well as varying with the amount of work the oculist has waiting for him in the reception room. Hence, while one oculist may find the visual acuity of a patient to be 20/20 in each eye, another oculist finds 20/10 by dint of coaxing, helping the patient's attention by pointing to the individual letters, asking the patient to compare letters, and making suggestions, such as where an "O" is miscalled "C," asking whether the patient detects any break in the outline of the circle. So the patient looking long enough, thinking hard enough, and comparing accurately enough, in time manages to read 20/10 instead of 20/20. This suppositious case (and it is not unusual) is the very same patient; now, which rating correctly states the patient's visual acuity, assuming that the lighting, distance, and other elements are the same in both cases?

In the matter of visual perception by mechanical means, we have in the camera all the gradations between the fast snapshot which would be too fast to be perceived by the human eye, up to the photographing of the stars which are so faint as not to be perceived by the human eye, but which are recorded upon the camera's plate only because the camera is mechanically moved so as to constantly be pointing at the star, the repeated light impressions from which, constantly impinging upon the camera's plate, finally leave their imprint there after many hours of exposure.

The one (snap shot) is too fast for the human eye or, if you please, for the human brain, working in conjunction with the eye, or both, considered as a sense unit, and the other is too slow (or too weak in intensity) for the human eye or

brain or both. Nevertheless, the human visual apparatus by education may be made to see and actually perceive (if there is a distinction) with greater speed, or may be educated to visualize over a period of time, gathering and retaining impressions which would have been imperceptible at first glance. It seems to be rational to suggest that neither of these extremes should figure in testing visual acuity. The test of visual acuity for practical purposes (and that should be the aim) would be the degree of visual acuity which the person possesses in the ordinary walks and labors of life, even test type being highly artificial and constituting only a very small portion of the objects which the average individual should be able to recognize at a distance in the pursuit of his daily happiness. Which is the most practical, to expect an individual to recognize at a reasonable distance his friend Bill Jones, who walks across the street or who passes him in an automobile which keeps within the speed limits, or should one expect the person who is crossing the street or riding in the machine to stand still and be pointed at for a long enough time that finally the repeated visual impressions of the individual are such that he is able to exclaim: "Oh, yes; that is Bill Jones." This is perhaps better illustrated in a moving picture, where the expression on the faces of the actors must be perceived at once or be forever lost to the observer.

This train of thought leads us to the logical conclusion that there is a given time within which the patient should speak or forever hold his peace, so that in testing the visual acuity, having arbitrarily taken five minutes as a visual angle (using Snellen's test type), I arbitrarily take five seconds (approximately: I do not actually time the patient), and if the patient is unable to mentally perceive the letter, or the illiterate figure, as the case may be, I count it against him, just as though he had been unable to see it at all. Of course, allowances should be made for the evident mentality of the patient, so that one who is very literate would be expected to name the letter in two or three seconds, and one who is illiterate might be given a slightly longer time. This is all along the line of considering that the ideal test of an eye is the measurement of the use that can be made of it for everyday practical purposes, including reading words and letters merely as an incident; and the correction of de-

fective vision should be with similar practical purposes of everyday life in mind.

Therefore, I make the suggestion that time be considered as an element in testing visual acuity, and that making slight allowances for differences in mentality, the patient be held to a certain arbitrary degree of speed in testing his visual acuity and that the average speed be arbitrarily fixed at five seconds for each object or letter.

30 N. Michigan Boulevard.

BACTERIOLOGY OF TUBERCULOSIS KIDNEYS

L. H. Spooner (*Journal of Medical Research*) states that for years a popular belief has existed that the septic manifestations of tuberculosis were due to a mixed infection with pyogenic organisms and that cavities containing caseous and purulent material resulted from the action of such organisms. The proof positive of such infection can be obtained only by a careful bacteriological examination of such lesions. Spooner's conclusions of such a study are as follows:

1. The tubercle bacillus can be cultivated in pure culture from tuberculous kidneys.

2. In ten cases examined positive results were found in fifty per cent of the cases.

3. Dorset's egg medium is the most satisfactory for primary growth.

4. With this medium only 40 per cent of the inoculated tubes showed growth in the positive cases.

5. Five per cent glycerine agar is the most satisfactory medium for secondary cultivation of the organism.

6. In no instance was there any evidence either in the kidney or the urethral urine of mixed infection.

7. Tuberculous caseation and suppuration is due to the activities of the tubercle bacillus alone.

8. Non-tuberculous infection of the kidneys is produced by one or more organisms which are always isolated from renal tissue, or from the urethral urine, and which grow readily upon simple culture media.

9. The clinical diagnosis of renal tuberculosis is suggested by the presence of the acid-fast bacilli in the urine. If a pus-containing urine, obtained from the ureter, shows no growth upon simple culture media after 48 hours incubation, another and very important link is added to the chain of diagnosis of tuberculosis of the kidney.

THERMOLABILITY OF SYPHILITIC ANTIBODIES

Gerard writes (*Comptes Rendus de la Societe de Biologie*) that by making comparative Wassermanns on the same serum, employing for the purpose a non-heated serum and a serum heated to 56° C., the existence of certain syphilitic antibodies thermolabile at 56° C. was demonstrated. Gerard was not able to determine if the greater thermolability of the antibodies bore any relationship to any stage of the disease.

PHYSICAL CHARACTERISTICS OF THE CHANCRE

Speaking in a general way, says an editorial writer in the *Medical Record*, the diagnosis of syphilitic chancre is easy, yet in practice much difficulty may arise. No faith must be placed in the dogma that the hard sore is always single, because in a certain number of cases there are several. In these circumstances it is probable that autoinoculation is the cause, immunity not being complete until the lapse of about ten days, according to Queyrat. Next comes the question of size, which has been generally stated to be about fifteen millimeters in diameter, but in practice it is not uncommon to meet with the so-called giant chancre. Induration is always present, but the physician must know how to look for it. If large chancres are seized in their largest diameter, it may escape detection, so the sore should be palpated in its lesser diameter or at its edges. On the other hand, pigmy chancres are so indistinct and their symptomatology so very limited, that their diagnosis may not be made unless an ultra-microscopic examination of the secretion is made.

The satellite adenopathy is of great diagnostic value, but it bears no relationship to the development of the initial lesion. Polyglandular, indolent, and aphlegmasic, it represents, with the duration of the period of incubation, one of our best diagnostic elements, but if, as occasionally happens, these lymph-nodes suppurate, there is considerable risk of an error in the diagnosis. It must also be recalled that chancres of the meatus have, on account of careless examination, been diagnosed as gonorrhea.

MAGNESIUM SULPHATE IN BURNS

Meltzer found that a concentrated solution of magnesium sulphate was of considerable value as an application in scalds and burns (*Jour. Phar. and Exp. Ther.*). It was found that burns of the second degree are invariably arrested in their development when a molecular solution of Epsom salt is applied early. As a rule burns of the third degree run a more favorable course under magnesium sulphate solution than under any other treatment. Solutions more concentrated than twenty-five per cent. had an even better effect. The good results were not so noticeable in the advanced stages of burns on account of the infection usually present, but even then it had a favorable influence.

OVEREATING

Germany lost the war and some other things, including gout and diabetes. Both diseases have become almost unknown in Germany, though once they were common. The reason is that Germans had to give their stomachs a long rest during the war.

We won the war and gained some other things, too, including an increase in diabetes, kidney diseases, artery diseases and other diseases attributed to living too well during the flush years after the armistice.

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NOVEMBER, 1921

Editorial

SCOTCH THE EVILS AT THEIR INCEPTION

Although none of the socialistic-paternalistic schemes for controlling and supervising the activities of the medical profession have as yet been enacted into laws by the National Government or by any of the various State legislatures, the danger of such legislation in the future is by no means negligible. If we desire to preserve the traditions and principles of our noble profession and prevent its practitioners from being made mere cogs in a great political machine we must work in season and out of season against the insidious propaganda of the amateur and professional uplifters, who, in order to obtain a little more power—and profit—are seeking to socialize the medical profession, not only to its injury but also to that of the public at large.

Inasmuch as the majority of the medical profession in the United States—especially those in the rural districts and who are therefore most immediately interested—are against these iniquitous schemes, it seems necessary to “scotch the evils” at their inception just as we “scotched”

the health insurance proposition last year when the House of Delegates of the American Medical Association was unanimously on the right side notwithstanding the strenuous efforts of the propagandists for five years “to put it over on us.”

WHAT AILS THE MEDICAL PROFESSION?

The kidnaping of the medical profession and its debauchery through socialistic legislation, the Editor foretold ten years ago. To my regret, my prophesy seems well on the way to fulfillment. It would be picayunish to cry, “I told you so,” but the Editor cannot forbear from referring physicians the country over to an article in the ILLINOIS MEDICAL JOURNAL and Bulletin of the Chicago Medical Society in September, 1911. This article cited conditions as they were then and as they were becoming. The article stated further that unless things took a change for the better, within one decade, or at most two decades, all doctors would be working for the state. If the next ten years carry developments in the socialization of medicine as rapidly as the past ten years have done, the Editor’s

prognostication will have outgrown itself at an incredible rate.

Germany, or rather the Prussian Empire, with its weight of Kultur resting heavily on its stomach, deserved undoubtedly a great deal of misfortune that has befallen. But there are some results of Kultur that Prussia can be consoled for even by its most ardent antagonists. Admitting that a "nation's health is a nation's wealth," how in the name of expectation can any thinking human feel that Germany merits the present medical inefficiency visited upon her? Before State Medicine infected the Prussian Herr doktors with empanelment, Germany had medical wonder-workers. Since then—well what can anybody expect of a doctor who receives for calling on a diptheretic patient the same or less money than it costs to ride on a street railway the fare for which is eight cents. In Germany, empanelled physicians under "state medicine" gets eight and one-half cents, even at the ante-bellum rate of exchange for making a visit. It is pretty hard to think that even a doctor, be that doctor a martyr inspired by Divine Grace, is going to feel very badly if he loses one of his two obstetrical cases when he knows that the work of "after care" will bring him in only eight cents per patient, for each visit that he makes? Especially since the medical profession in Germany is not endowed nor has any statute been effected that enforces celibacy upon the profession, though that of course, may be the next step. Celibacy not always being a success with mortal men even when some of them practice it voluntarily, just what disposition might be made for state care of intimate members of a misguided but erring physician's domestic circle is open to discussion. Must he care for them on his meagre income or do the tax-payers help him out? Is there to be an especial tax levy because of the necessity for medical concubinage? And is that the sort of man who makes a good physician? History doesn't state so. The success of the medical profession has lain in the juxtaposition of good medicine and good morals and of the alliance of the doctor and the church or other ethical institutions that preach the doctrine of elevation of the spirit rather than that of the degradation of the body.

The Bolsheviks are building Babel. It is in our midst again. The confusion of tongues is

upon us. Glance at the propaganda program once more.

Following the sequence of the outline of the causes of medical undoing, as outlined in the October number of the JOURNAL, the investigator is confronted with

1. *Lessening of Morbidity Due to Hygienic Education and Practice.*

Disease and dirt are own sisters. Teaching the layman this; telling him to keep the dirt out of his system and his neighbor's dirt at home, has routed typhus, typhoid, dysentery and allied afflictions. Sewage disposal, purification of water supplies, inspection of food, especially of milk and of meat; insistence upon cleanliness in kitchens, bakeshops, and other laboratories for the production of essentials for the nourishment of the human system together with determined effort to exterminate rats, flies, mosquitos and other carriers of contagion or filth, have achieved much. Sanitation, sanitation and more sanitation—that is the war cry of good hygiene and the place where state medicine with its police powers of prevention and only of prevention should be stationed and stopped.

As a matter of national efficiency, it is in this housekeeping section of prophylaxis that the niche is placed in which state medicine belongs, but it should be put there and kept there, under the thumb of the licensed physicians of the country. Otherwise the tail is going to wag the dog to death.

2. *Diminution of Disease Due to Specific Treatments for Its Specific Manifestations.*

The research work of the patient toilers in the laboratories has not been in vain. France, Germany and Italy set the pace, half a century ago that the United States has followed, until our country now is preeminent in medical endeavor and repute. Heaven grant this prestige shall not be lost, ravaged over night by the ghouls of the Soviet. Isolation of germs of various scourges with subsequent production of anti-toxins and serums antagonistic or annihilative to these destructive agencies is cleaning the calendar of human bogies. Diptheria, rabies, venereal ailments, smallpox, with improved vaccines, meningitis—maladies almost without end, yield as if short-circuited. "For every action, there is an equal and positive reaction." And the savants figure not unwisely, "For every germ there is

an equal and positive cell action." Cancer and tuberculosis germs are sought for by day and night, all over the world, by patient students who work without complaint. Only the spectacular achievements see the light of public comment. The "unhonored and unsung" veterans of laboratories are as diligent and unafraid as were the millions of unnamed dead who lie from Flanders to Gallipoli.

Over-crowding the Medical Profession with Consequent Debauchery through Economic Pressure of Poorly Qualified or Ethically Unequipped Membership.

This is the border-line segment. While a "cry from Macedonia for doctors" comes from the sparsely settled hamlets and difficult districts of impoverished New England localities and the inaccessibilities of the far West, of the "poor white and cracker" settlements of the South, the shortage of 25,000 doctors reported by various of the medical journals is certainly not felt in the cities. Over-crowding of the medical profession comes as it does in all professions—from the inept! True, there may be exceptions of a good man held down by untoward circumstances from an unjust fate or a shrewish destiny, but a man is drawn to his profession, for in medicine, as in religion or in journalism or any of the fine arts. A man has to be born for the job to be of use in it or of use for it. He must know the business thoroughly; possess for it a sixth, seventh and even an eighth sense; read humanity, know humanity and yet manager to love humanity and to believe in it, and be willing to sacrifice his hide for his ethics any day and to love his patients, charity or good paying, as well as he does his immortal soul. It takes a pretty big man to meet all of those requirements. And even when he does, what if his own health fails? Doctors aren't made of asbestos, yet, though the fires they are being tried in through bolshevistic legislation have kept some of us pretty hot and almost reduced us to pitch, small wonder if a doctor falls ill, and if his bank account isn't large, and unless he comes of very moneyed stock after apprenticing ten years of his full youth and between \$10,000 and \$20,000 good hard cash in learning to be a man of medicine, is it fair to estimate that he has little trouble in cutting what coupons he has—trouble falls upon his family. Along comes the tempter—Mr. John Jones, who is worth a million, but who has strayed from the

domestic fold and has a little job he wants done. The poor sick debtor-pursued doctor with a little pressure from the bank where John Jones owns stock pretty heavily, or is a cracker-jack customer, changes his perspective. Immediate obligations are lifted. He gets a job in the contract or welfare department of the Jones factory. He lasts a while or he doesn't. But even if he does, he deteriorates, that man. As his girth and his bank account increase, his ethics grow smaller and smaller. Pretty soon he can't see anybody in his profession except the materialists like himself. The idealists he calls fools. That is, if he stays in John Jones' favor and does what the corporation wants him to. But there is always a chance that John Jones may die or the poor deluded physician may fall from grace with John Jones. Then, what becomes of him? His ends are many. Dante could rise from the dead and write another annex to Hades on the ends of such as he. For, "truly the fall of the righteous man is greater than that of one less blessed."

You can't shave the truth. You can't clip off the vitals of what is right—not even if you are the finest surgeon in the world—and not have trouble result, and that is why so many learned physicians meet old age in poverty or drift into the cults and isms where compensation is greater than in legitimate practice.

The doctors who studied medicine because they thought it a gentlemanly job that paid well, and one that has given them a lot of power and pull, ought to get out of the profession voluntarily or get kicked out, no matter how wealthy they are. A "ham" actor can be egged and cabbaged off the stage, but a "ham" doctor either starts up a private sanitarium that will cure everything from baldness on a hen egg to endocrine perversion with bismuth and pepsin, or he ties up with a corporation or joins the lobbyists in making fake laws to do to death the profession he has thrice betrayed.

COMPROMISE WITH THE DEVIL AND YOU ARE LOST

Dr. Ed. H. Ochsner of Chicago, one of the greatest living authorities on Medical Economics, in his article on "Some Medical Problems," in the May, 1921, issue of the ILLINOIS MEDICAL JOURNAL, says:

"I met one of my colleagues in the hospital the other day and he said to me, "Why don't

you get in the band wagon?* Why don't you adopt this makeshift scheme proposed at the North Side Branch? I know it is only a makeshift, but you had better adopt it rather than ultimately submit to compulsory health insurance. You know we sometimes have to compromise with the devil!" My answer was, "No, Doctor. The minute you compromise with the devil you are lost. We are in the right. I am a firm believer of the ultimate victory of the right. There is only one real antidote for all of these uplift schemes and that is better work on the part of the private physicians, be they either general practitioners or specialists. That is the only antidote that is worth considering. The others are all makeshifts, they are all compromises, and the minute right compromises with wrong it is whipped."

Some Doctors do not appreciate the heavy duty of individual responsibility, nor the fact that if truth be silent it will be disregarded as well. There is a solemn and serious duty on each of us. We must speak when we should be heard, and speak before we are smoked out of our retreats. We must act when the time demands action and not sit idly by till, driven to a corner, we turn like some craven cur to fight for what in justice is ours.

Indifferentism, spinelessness, is the curse of the medical profession today. Were we all alert and aggressive there would be none to withstand us. There is a persistent call to be a man among men, proclaiming our medical affiliations when necessary; not hiding behind a shield of an easier way, hoping that perhaps our sentiments may not be noted, or if they be, that attacks on them may be warded off by some *deus ex machina*, and we be saved the embarrassment and annoyance of taking a firm, decided stand for our profession, for principle and for our own protection.

It is needless to say that persecution threatens us; that organizations rise on every side with the idea of making lay persons take over the practice of medicine; or of incompetent persons getting into the practice of medicine by side door methods and ultimately stamping out the ideals for which the medical profession have stood throughout the ages.

There are those who seek to deprive us of lib-

erty of person and conscience, with their restrictions and regulations, until the practice of medicine is purified and methodized to the last degree by the recurring and often redundant ukases and pronunciamientos of the self constituted regulators of all mankind.

Never has thoughtfulness and caution been more needed than at present. A wave of emotionalism has swept over the country. Whatever is, is assumed to be wrong. Change, regardless of its results, is assumed to be synonymous with progress. The advocates of change resort to a style of reasoning which is none the less fallacious because of its being so familiar. Practically any public measure, nominally designed to change existing conditions and labeled a "welfare bill," can secure wide and unquestioning support, regardless of its merits. The unscrupulous politicians, office-seekers, professional agitators, uplift zealots, who are palpably exploiting such measures, are being exalted in the esteem of a deluded public. Those who urge sanity and caution, or who dare to protest when wanton injury is threatened to the social fabric, are being branded as "reactionaries" or vilified as selfish opponents of progress. It may be granted that there is something in this desire for uplift legislation in the directions here indicated that is flooded with feeling, nobly prompted. But it ought to be granted that this desire would profit much from a dose of rational criticism. The fancy that, by raising funds, by setting in motion committees, by hurrying through legislation, the ideals of perfection can be realized, needs to have its rein checked. There is need of examining all these undertakings for the realization of the dream of perfection in the strong light of reason.

If conditions such as those do not warrant action and strident, instant, forceful action by every leader in medicine throughout the length and breadth of the land, then no situation that can arise will require action. We can get nowhere by irresolution and inaction nor gather strength by lying supinely on our backs until the enemy will have bound us hand and foot.

The time cries for action. Apathy means defeat, and indifference in this hour of trial is heinous. This is the time when we must face conditions as they are and take such actions for preservation and self protection as the circumstances may require. No Doctor, individual or

*Dr. Frank Billings' latest scheme, "Health Centers" erected by county taxation. The scheme means the shortest route possible to "State Medicine."

Society can fail to heed the call. The command is forward, none can now afford to stand back. We must go forward ready and eager for any and every sacrifice. No other course is to be considered.

Finally, we say with Dr. Ed Ochsner: "No Doctor, the minute you compromise with the Devil, you are lost."

MEDICAL MEN IN LEGISLATIVE BODIES

Health is the most precious asset of the human family. Assuming that all legislation is for the most good to the greatest number, is there not a dearth of medical men in legislative bodies and evidences ample in legislative production of the fact?

There is now a greater representation in Congress than ever before, viz.: Dr. Ladilas Lazaro, Louisiana; Dr. Caleb R. Layton, Delaware; Dr. Archibald E. Olpp, New Jersey; Dr. John J. Kindred, New York; Dr. John W. Summers, Washington, in the lower House and Dr. Joseph France, Maryland, in the Senate. The per cent. is yet too small and the middle west unrepresented medically.

How much better it would be for the public and the profession if even this proportion was in the law-making bodies of the states. The advantage of guarding the people's interest in health matters and the physician in the practice of the healing art is by influences from the inside as well as from the outside.

The strategic inside position will insure consideration and win concessions never offered the outside. Legislative committee work should be less burdensome and more effective with co-operation of both forces.

The time is now when the medical organizations begin a survey of the field and insist upon representation in all legislation. Representatives should be tactful as well as talented, with ability and disposition to defeat vicious bills, which has become a necessary qualification.

The proposed 5 per cent. tax on medicines in the new Tariff Bill, thus penalizing illness while indulging luxuries, was eliminated largely by the combined effort of medical members. This eloquently demonstrates what organized medicine can do when energetically and intelligently led.

In the great number of physicians there is power if there could be unity of action.

How many doctors in the present Illinois legislature? What is the prospect of representation in succeeding ones, if there is not some reckoning with the powers that be? There is time for thoughtful consideration; will it go by and the opportunity with it?

COMPULSORY ABORTIONS

Russia has abolished all laws against abortion; furthermore all abortions in Russia must be performed free. Any woman who wishes to have an abortion performed just steps into a municipal or government hospital and has the thing done without any questions and without cost. Private practitioners may perform abortions, but they must not charge any fee whatever. It seems that compulsion has about gone the limit in Russia. We have in America a goodly number of soviet government bugs both in and out of the medical profession. We think it is about time for a house cleaning.

ANOTHER UNFAIR TAX ON ALCOHOL

There is before Congress a bill proposing an increase of tax on alcohol with a drawback of \$4.20 a gallon.

It has been estimated that this will tie up capital estimated as amounting to somewhere between twenty and thirty million dollars for the drug and chemical interests of this country. This will mean, of course, a very decided increase in the cost of all medicines in which alcohol is employed, such for instance, as fluid extracts, tinctures and elixirs, and also in the cost of other remedies and chemicals in which alcohol is used in the process of manufacture, as for instance, solid extracts and a large share of the synthetic chemicals.

The said proposal would tie up for an interminable period of vast capital—as an illustration, approximately \$1,500,000 annually in the case of Parke, Davis and Company, Detroit, alone without ultimately adding one penny to the treasury of the United States, or aiding in the enforcement of prohibition and without recompense to lawful business for interest, additional clerical help and counsel fees incidental to keeping accounts and prosecuting claims for rebate;

and in this connection consideration should also be given to the inevitable increased cost to the ultimate consumer of medicines, food products, and other necessities of life in the manufacture of which alcohol is an essential factor.

It is time that the members of the United States Senate and House should be educated on the subject of alcohol and five thousand uses for other than beverage purposes. Doctors of the United States should get busy with their constituents and help defeat this nefarious proposed legislation.

DR. HUGH CABOT'S MEDICAL SOCIALISTIC SCHEMES FOR MICHIGAN.

If anyone thinks that we are borrowing trouble when we talk about the possibilities of State Medicine and the evils resulting therefrom, let him digest the statement made by Dr. Hugh Cabot, the new dean of the Medical Department of the University of Michigan, who is quoted in the daily papers as having said, "The limitations of the services of the University Hospital to the indigent people of the state, to my mind, is undemocratic. The hospital should be open to rich and poor alike."

We all know that the hospitals of the University of Michigan have been pauperizing the community, not only in Michigan but in sections of Indiana and Ohio, by furnishing gratuitous medical and surgical treatment to any who applied, whether able to pay for such services or not. Even if the authorities of the University of Michigan considered that the tax payers of Michigan were entitled to gratuitous medical and surgical services because of the taxes paid to support the institution, it is inconsistent to consider that people residing outside of Michigan, who pay no taxes to the support of the institution, should be accorded like privileges. However, the system is wroly wrong and in the end is bound to end disastrously. There is no reason why the rich or well-to-do people of Michigan should not pay for their medical and surgical services just as well as to pay for their plumbing or for any other services rendered them. If the state is going to furnish gratuitous medical and surgical services to the rich, then why not furnish them other necessities, or, for that matter, with automobiles or other luxuries enjoyed by the rich. We notice that most of the advocates of this pernicious form of State Medicine are safely entrenched in a soft berth for themselves, and Dr. Hugh Cabot, perhaps not being really obliged to practice medicine as a vocation, is very fortunate in being at the head of a great university which pays him a salary that amply provides a comfortable living for him, but what about the struggling doctors, perhaps graduates of the Medical Department of the University of Michigan, who are depending upon the public for support, but who must compete with their alma mater, and, worst of all, an alma mater that donates its services to rich and poor alike? The time

and money expended in securing a medical education means nothing and brings nothing unless its possessor can fall into a soft berth provided by federal, state or municipal support.

However, aside from all this discussion of the economic phase of the situation as it affects doctors, there is a far more important matter for consideration and that is the one of the limitations of individual effort. It is quite possible that a few men occupying soft berths may continue to progress, but for the vast majority there is little initiative, and in the main patients are going to fall into the hoppers of institutions that treat them in a rather impersonal and machine-like way, oftentimes with mediocre services. Aside from this there will be the ever-present political phase of the scheme to be dealt with, and experience shows that those selected for federal, state and municipal positions are not always those who are best qualified, but those who, for one reason or another, are able to control the most influence.

We have no quarrel with those who see fit to furnish free medical and surgical attention to the worthy poor, for that practice is upheld and followed by every member of the medical profession, but the scheme proposed by Dr. Hugh Cabot is unworthy of acceptance as being the best for the institution of which he is dean, nor is it the best for the people of the state. For the medical profession it eventually will prove annihilation, as private practice, except in a few isolated instances, can not exist in the face of that sort of competition.

It strikes us that Michigan has been flirting with several socialistic features, and the Medical Department of the University of Michigan long has been a thorn in the flesh of the medical profession of the state through its tendency to socialize the practice of medicine. Now comes Dr. Hugh Cabot, resplendent with the glamour of a reputation secured in the literary, aristocratic and aesthetic atmosphere of Harvard University, with revolutionary and bolsheviki notions which, as dean of the Medical Department of the University of Michigan, he expects to thrust upon the people of Michigan, whether they want them or not. Perhaps a certain element among the people in Michigan will shout their approval, but what about the members of the medical profession whose throats are being cut in order to furnish greater reputation and power for men like Dr. Cabot? And what about the people who in the end will be the greatest sufferers from such an impracticable scheme? As we have said before, if we are going into this socialistic business, why not socialize everything, like they do in Russia, and get the agony of the experience over at once in order to get back to the sane conduct of affairs at an earlier date? It is as fair to put all vocations under state control as it is to put the medical profession there.

This whole question of state medicine reminds us of what we have said before, and that is that the medical profession has more to fear from members in its own ranks, men who have been placed in high positions very largely through the efforts of their

fellow professional men, who are really the worst offenders in advocating and supporting some of the wild, impractical and socialistic schemes which have as their ultimate end the annihilation of private medical practice. It is time to have an accounting and separate the sheep from the goats. We may have a very high regard for Dr. Hugh Cabot's ability, but we only condemnation and censure for him in advocating such schemes as he proposes in Michigan, and the quicker the medical profession places its stamp of disapproval upon him when he continues to advocate such socialistic schemes as the one which forms the basis of this discussion, the better it will be for the medical profession in Michigan.

Indiana Medical Journal, October, 1921.

THE AMENDED MATERNITY BILL STILL OBJECTIONABLE.

It is alleged that certain amendments have been offered to the Sheppard-Towner Maternity Bill some of them claim to be for the purpose of conciliating the Doctors. Doctors still condemn the principle of federal aid as pernicious and dangerous, that it is an encroachment on the function of the State and an invasion of State authority tending to a demoralization of the State and Public Health work rather than its development. With ex-Governor Lowden of Illinois we agree that if the present tendency towards centralization at Washington goes on all vitality will go from the several communities and states of the country in the management of their own affairs. This measure cannot be satisfactory to doctors, manufacturers, and the tax paying people in general over the country unless the vicious feature of federal aid is eliminated. We hope our law-making body has no desire to discriminate against taxpayers in handling this measure.

CONTEMPLATE THE SPECTACLE OF A HORSE THIEF STANDING AT THE BAR AND PLEADING IN DEFENSE THAT HE HAD ONLY FOLLOWED AN' ANCI- ENT PRECEDENT

Senator James A. Reed of Missouri speaking in opposition to the socialistic maternity bill, June 29, 1921, says:

The proponents of this measure have named it "the child welfare bill." Everybody wants babies and mothers to be happy. Accordingly, the mere title of the bill inclines everybody to be for it. But, sir, it is not enough that the title of the bill

shall be alluring or that its alleged purpose shall be good. It remains for Congress to ascertain whether the measure will produce good or bad results and whether the acts contemplated lie within congressional jurisdiction.

Notwithstanding all the votes pledged, the influence of an active lobby, and the false propaganda disseminated country-wide and at Government expense, I intend to analyze this bill and to give frankly the reasons for my opposition.

The ambitious character of the scheme, the vast number of people its proponents hope to employ, is indicated by the fact that the bill as introduced called for an annual appropriation of \$4,000,000. That demand being too much for the stomach of the Committee on Education and Labor, the bill as reported cuts the appropriation to \$1,480,000 for the present year. One million dollars of the above amount is to be divided among the States in proportion to their population. Similar appropriations for each succeeding year are contemplated. It is certain much larger sums will be demanded. There is no limit within the bounds of the appropriation to the number of people who may be employed, the salaries which may be paid, or upon the money which may be expended in literature, propaganda, and traveling about the country. The entire control is placed in the Children's Bureau. It can do with the taxpayers' money almost anything it may desire. The States can get no money unless they expend the funds in accordance with the demands of the bureau, however fantastic, foolish, or dangerous the demands may be.

I have stated that the above-mentioned vast powers are vested in the Children's Bureau. But the chief of the bureau is in fact supreme. It is true that a dignified advisory committee is named in the bill, but the chief is nowhere compelled to accept its advice or that of anyone.

Mr. Lodge: It other words, unlike all other bureaus and commissions under the Government that I know of, the head of this bureau is in absolute and final control.

Mr. Reed: I so understand the bill.

Mr. Lodge: Not even subject to the orders of the President of the United States, as far as this bill goes.

Mr. Sheppard: The Good Roads Bureau has similar authority.

Mr. Reed: O Mr. President, that kind of argument is becoming quite familiar. When a piece of blundering or vicious legislation is exposed, the common defense is for one of its advocates to arise and declare that Congress has passed other unjustifiable bills. Having delivered that telling blow, he sits down in the serene confidence that his antagonist is vanquished. He has, however, only succeeded in proving that Congress has been guilty of prior blunders, which instead of inviting should warn against repetition. The commission of a vicious act can not be justified by the citation of a vicious precedent. Contemplate, if you please, the spectacle of a horse thief standing at the bar and pleading in defense that he had only followed an ancient precedent established by the horse thieves of the past. [Laughter.]

SPINSTER LADIES TRYING TO RUN THE MATERNITY PROBLEM OF THE NATION. THIS IS A RARE BIT OF IRONY

Senator Reed in his famous speech against the Maternity Bill says:

Returning to my theme—as these immense powers are conferred upon the chief and exercised through her associates in the bureau and her chosen assistants, the question of personality becomes important. Accordingly I give the names: Miss Julia Lathrop, chief; Mrs. Helen S. Woodbury, Miss Blanche Steele, Miss Emma Lundberg, Miss Catherine Lenroot, Miss Dr. Anna Ruhl, Miss E. N. Matthews, Miss Flora Seibert, Miss Mary Buckford. Observe that the entire bureau is composed of unmarried women, except Mrs. Helen Woodbury and her husband, who both hold jobs in the same department.

It seems to be the established doctrine of this bureau that the only people capable of caring for babies and mothers of babies are ladies who have never had babies. [Laughter.] This is further indicated by the list of field workers employed. The book "Maternity Care and the Welfare of Young Children in a Homesteading County in Montana" is prepared by Miss Dr. Grace L. Meigs, Miss Viola I. Paradise, Miss Helen M. Dart, Miss M. Letitia Fyffe, Miss Dorothy M. Williams,

Miss Janet M. Geister, Miss Stella E. Packard, Miss May R. Lane, and Miss Etta F. Philbrook. The book "Infant Mortality" is credited to Miss Nila F. Allen, Miss Melissa Farrell, Miss Roberta King, Miss Elizabeth Moore, Miss Jessie Riall, Miss Mary Van Zile, and Miss Rena Rosenberg. The book "Rural Children in North Carolina" is by Dr. Frances Sage Bradley (presumably a miss) and Miss Margaretta A. Williamson. "Maternal Mortality" is the work of Miss Dr. Meigs, Miss Emma Duke, and Miss Viola Paradise. The book "Infant Welfare Work in Europe" is attributed to Miss Nettie McGill, Mrs. Frances Hawes, and Miss Anna Kalet. All the medical doctors who have been concerned in the preparation of literature or the work of the bureau are women and are, I believe, with one exception unmarried.

At the very threshold, therefore, we are confronted by the remarkable and amusing fact that we are asked to turn over questions of infant bearing and infant care to an aggregation composed almost exclusively of spinsters. It is enough to arouse "the laughter of the gods."

But, Mr. President, when we employ female celibates to instruct mothers how to raise babies they have brought into the earth, do we not indulge in a rare bit of irony? I repeat I cast no reflection on unmarried ladies. Perhaps some of them are too good to have husbands. But any woman who is too refined to have a husband should not undertake the care of another woman's baby when that other woman wants to take care of it herself.

A wise man places all important tasks in experienced hands. He does not engage as a civil engineer a man who has never seen a level; as a doctor, a person unacquainted with anatomy; or as an instructor in music, an individual ignorant of its notes. Is it not the height of unwisdom to delegate the solution of problems of child bearing and child care to a woman who has not had the experience of motherhood, and very possibly does not so desire, or to a bachelor girl who never beheld in a baby's eyes the mirrored vision of a mother's tender love, nor watched the loving dimples in a baby's cheek gather to welcome a mother's rapturous kiss?

What I have said and shall say I mean to apply to the members of the Children's Bureau, including its servants, agents, and employees,

substantially all of whom enjoy the blissful and seemingly perpetual state of single blessedness.

I care not how estimable the officeholding spinster may be, nor how her heart may throb for the dream children she does not possess, her yearnings can not be substituted for a mother's experience. Official meddling can not take the place of mother love. Mother love! The golden cord that stretches from the throne of God, uniting all animate creation to divinity. Its light gleams down the path of time from barbarous ages, when savage women held their babes to almost famished beasts and died that they might live. Its holy flame glows as bright in hovels where poverty breaks a meager crust as in palaces where wealth holds Lucullian feasts. It is the one great universal passion—the sinless passion of sacrifice. Incomparable in its sublimity, interference is sacrilege, regulation is mockery.

The wild beasts hear its voice and answer to its call. A tigress finding her cubs slaughtered, pauses to lick their wounds, and then with raging heart seeks out their murderer. A she wolf standing at the mouth of her den, with gleaming fangs and blood-red tongue, dies in defense of her whelps. Tiger's cub or wolf's whelp, I would rather feel the rough caresses of the hairy paws of my savage mother, I would rather have her care and protection than that of an official animal trainer.

I once saw a little timorous mother quail, with marvelous intelligence and still more marvelous courage, protect her brood by exposing herself to the hunter's deadly aim. I then realized that nothing could take the place of mother love.

Mother love! It has produced, fondled, reared, inspired, and glorified all of the shadowy hosts who have passed across the "bank of time" since man first raised his eyes toward the heavens. It is, I say again, the golden cord that binds the earth to God. Official interference between the mother and her babe is tyrannical and criminal.

READ IT CAREFULLY DOCTOR AND PASS IT ON

We recently arranged to have a copy of the speech of Senator James A. Reed of Missouri against the socialistic measure known as the Sheppard-Towner Maternity Bill mailed to every member of the Illinois State Medical Society.

Senator Reed's speech is by far the best one so far made against this obnoxious measure. We hope every Doctor in the State will read it carefully, then get busy with his Senators and Representatives in Congress voicing opposition to the enactment of this Russian system of maternity. After reading the document kindly pass it on to some influential clubwoman in your vicinity.

We suggest further that the individual Doctor get busy and help educate your brother physician and the people at large to the trend of the times in enacting Bolshevik legislation.

The time is ripe for a concerted move to bring about the retirement of men in public life who are advocating socialistic schemes in our law-making bodies. This ideal result can be achieved by a cohesive campaign on the part of the Doctors, Dentists and Druggists in association with civic bodies who are also now awake to the viciousness of the proposed measures advocated by uplift.

BIRTH CONTROL AND THE MATERNITY BILL. THE INTERLOCKING DIRECTORATE

Mr. Norman Hapgood, in the Hearst papers, September 22, 1921, charges the opponents of the Sheppard-Towner Bill with "unfairness" in mentioning "birth control" in connection therewith. He says, misquoting, that Miss Robertson "declares it provides for birth control," and after asserting, "I assume she has not looked at the bill," Mr. Hapgood makes this remarkable reply:

"The matter was intentionally left out of the bill because with some people it is a matter of religious faith."

In other words, after misquoting Miss Robertson, and unjustly assuming that she had not looked at the bill (when she printed the full text in the first part of her speech), Mr. Hapgood feebly pretends that absence of direct provision for "birth control" in the bill is a complete answer to the charge that it would tend to promote, or is secretly designed in part to further, the "birth control" cult.

Of course, neither Miss Robertson nor anybody else has said the Bill "provides" for "birth control" openly; and now comes Mr. Hapgood with the naive explanation that it was "intentionally

left out" to catch Catholic votes! But, as numerous non-Catholics have pointed out, the "related subjects" clause in the original bill (also "intentionally left out" by the Senate Committee after "birth control" argument by opponents), and the "other suitable methods" now in the bill, can mean anything, including "birth control," that the head of the system considers related to "the hygiene of maternity and infancy."

There are two "birth control" organizations, with interlocking directorates, known as the "Birth Control League" and "The Voluntary Parenthood League." Both organizations issue lists of endorsers and patrons. The list of alleged endorsers issued by the Voluntary Parenthood League includes:

Six members of the Sheppard-Towner Emergency Committee, to wit:

Rev. Percy Stickney Grant, Dr. Stephen Wise, Mrs. Julius Rosenwald, Prof. Irving Fisher, Miriam F. Scott, Ernest Poole.

Why does the Voluntary Parenthood League have six representatives on the Sheppard-Towner "Emergency" Committee?

But the Voluntary Parenthood list includes other interesting persons:

Norman Hapgood, who protests against the "unfairness" of exposing a thing that was "intentionally left out."

Miss Jeanette Rankin, original introducer of the Maternity bill.

Dr. Ellen C. Potter, star witness for the Sheppard-Towner bill at two recent hearings; also head of the Pennsylvania Child Hygiene department.

Miss Lillian D. Wald, original proponent of the Children's Bureau, who has been writing letters to the papers since February in favor of the Sheppard-Towner bill.

Dr. Valeria C. Parker, star witness for the Sheppard-Towner bill before the Senate Committee, and chairman of the "social hygiene" committee of the National League of Women Voters, of which she is also a member of the Executive Council.

Elsie Clews Parsons, author of the "early trial marriage" theory, whose husband introduced the first Children's Bureau bill in Congress.

Owen Lovejoy, a member of the famous Chil-

dren's Bureau conference to draw up "minimum standards" of child welfare.

Judge Ben Lindsey, one of the chief original supporters of the Children's Bureau.

Mrs. Stanley McCormick, First Vice-President National American Woman Suffrage Association.

Mrs. Harriet Stanton Blatch, daughter of Elizabeth Cady Stanton, and a leader of the National Woman's Party drive for "pay for mothers."

This will be sufficient, for the moment, to indicate whether it is "unfair" to ask why so many "birth control" advocates are on the Sheppard-Towner "Emergency" Committee and otherwise identified with the chief organizations in favor of the Maternity Bill. There are a great number of other persons "interlocked" with "birth control" and the "baby bill" to which space cannot now be devoted.

The Voluntary Parenthood League is making a great "drive" on Postmaster Hays to have "birth control" removed from the prohibitions of the postal laws. The Birth Control League is arranging a great "conference" in New York for November. Why is there so much coincident "emergency" in the matter of "birth control" and the Maternity bill that birth control advocates hold at least six places on the Sheppard-Towner Emergency Committee?

A CRIME WHICH KNOWS NO PARALLEL IN THE HISTORY OF THE WORLD.

The fact that the opposition to the Maternity Bill has grown to so enormous proportions speaks well for the sense and character of the American people. The unwelcome publicity given to the real character of the bill led to the resignation of Miss Julia Lathrop, head of the Children's Bureau, and one of the Bill's chief promoters. Her successor, Miss Grace Abbott, is, like Miss Lathrop, a product of Hull House, although this fact, for some reason, is nowhere mentioned by the press.

The Children's Bureau, which is to have large sums annually from the Federal treasury for propaganda purposes, if the bill passes, has already issued a booklet at the expense of the tax payers, "Maternity Benefit Systems in certain Foreign Countries" which is socialistic and bolshevistic in almost every line. This book gives

unqualified endorsement to a socialists' book by Madam Kolontai, a Russian woman in the pay of Germany, who is "commissar of Public Welfare" under Lenin (see documents 1 and 7 issued by United States Bureau of Public Information, September, 1918). The work of her department, in taking children away from their parents and herding them together in the "care" of the soviet government, has had such disastrous results, notably with little girls, that it has been characterized by a distinguished Russian, Professor Boris Sokoloff, *as a crime which knows no parallel in this history of the world*. They have destroyed morally as well as physically a whole Russian generation. Sir Paul Dukes says, that the central tragedy of Russia today is the results of Bolshevik corruption of children under Madam Kolontai's "welfare" and "maternity" system.

Yet it is this woman's socialist teachings which are endorsed by the Children's Bureau at Washington! and it is this Children's Bureau which asks for millions of dollars from the public treasury to make a beginning in this country of government care of children! The Sheppard-Towner Bill is merely the entering wedge. The next step in the Feminist-Socialist program are government wages for all mothers, and government care of children until they are twenty-one, which would cost untold millions. It would also, as its advocates point out, leave men much freer to strike, with no responsibility for support of their women and children. One of the chief workers for this maternity bill has made this interesting admission; "all the wreckers of capital, the constitution and our institutions are solid for the Sheppard-Towner Bill."

MARGARET C. ROBINSON, —
AMERICA, October 15, 1921.

Cambridge.

GET AFTER REPRESENTATIVE GRAHAM OF THE 14TH DISTRICT ILLINOIS.

The Fourteenth (14th) Congressional District comprises the Counties of Hancock, Henderson, McDonough, Mercer, Rock Island and Warner.

Representative W. J. Graham, Aledo, Ill., we are told, is now leading the advocates of The Sheppard-Towner Maternity Bill in the committee on Interstate and Foreign Commerce, House

of Representatives, Washington, D. C. We have been told that he has been talking quite loudly in favor of the bill. In the *Philadelphia Ledger* of October 5th, under "Caption Infancy Bill Delay In House Assailed" he makes an indignant protest against Chairman Winslow's dilatoriness. The Doctors, Dentists and Druggists together with the business men of the counties mentioned should bring Representative Graham to task for advocating Maternity Legislation similar to Madam Kolontai's Russian Maternity system which has been characterized as a crime which knows no parallel in the history of the world.

MATERNITY BILL STATUS

In the House, the Bill (S. 1039) has been referred to the Interstate and Foreign Commerce Committee, which held hearings on such legislation from July 12th to July 23d; 18 witnesses appearing against the Bill and 12 in its favor, 10 physicians speaking against it and 5 in its favor, of which 3 were officials of children's bureaus.

The members of the Committee, which has not as yet reported the bill, are as follows:

Samuel E. Winslow, Chairman, Mass. (Rep.)

Republicans:

James S. Parker, N. Y.
Walter R. Stiness, R. I.
Edward E. Denison, Ill.
Schuyler Merritt, Conn.
Evan J. Jones, Penna.
William J. Graham, Ill.
Walter H. Newton, Minn.
Burton E. Sweet, Iowa.
John G. Cooper, Ohio.
Everett Sanders, Ind.
J. Stanley Webster, Wash.
Carl Mapes, Mich.
S. E. Burroughs, N. H.
Homer Hoch, Kan.

Democrats:

Alben W. Barkley, Ky.
Geo. Huddleston, Ala.
Paul B. Johnson, Miss.
Sam Rayburn, Tex.
Clarence F. Lea, Cal.
Harry B. Hawes, Mo.

THERE IS MONEY IN IT

"MATERNITY IS A COMMERCIAL ENTERPRISE"

The following from the "Woman Patriot," October 15, 1921:

There is *money* in the maternity business. For example, Mr. C. A. Grey, publisher, 285 Tremont street, Boston, gets out a little paper called "National Baby Hygiene," urging readers to "enter the fight for the American Maternity Bill." We thought Mr. Hearst had a sort of trade-mark on "American" as applied to journalism, but its application to the Hearst-Rosenthal Maternity Bill is no more inappropriate than its general use by Hearst.

The "National Baby Hygiene" magazine is sold on the streets for 25c a copy, by girls who receive 50 per cent of the price for selling it. No volunteers are employed. "It is a straight commercial proposition, 50-50," says Mr. Grey.

"Won't you help the babies?" is the usual catch sales talk of the young ladies who split 50-50 with Mr. Grey on his "straight commercial proposition."

One young woman says she averages \$10 a day and another says she "cleaned up" \$35 in two days at New Bedford, for naturally everybody is willing to "help the babies."

Mr. Grey is at least frank. He says the thing is "published as a commercial enterprise." Grey says he has women in all the big cities of the country and sells 600,000 copies to an edition. There are no regular issues; no second class postal privileges; copies are printed as needed by the girls in this "commercial enterprise" that takes advantage of the public's attitude toward all tag-days, etc. for baby welfare societies, churches, etc.

Mr. Grey prints an article by Dr. S. Josephine Baker of the New York Child Hygiene Department and some material ascribed to "the United States Child Bureau." He says "every state in the Union should authorize the payment of benefits to women before and during the maternity period." His magazine "will try to solve your child problems." "Write us," he urges. "No fees charged. We do not give MEDICAL ADVICE." And thus is peddled a "commercial enterprise" under the pretense of helping mothers and babies that gives 50c on every dollar to the saleswoman and 50c to the publisher.

WHO IS RESPONSIBLE FOR THE SHEPPARD-TOWNER MATERNITY BILL?

THE HEARST-ROSENTHAL MATERNITY SYSTEM

SHALL THE HANDS OF HEARST ROCK THE CRADLE AND THE SHIP OF STATE?

The following is from the Woman Patriot, October 15, 1921:

It has been supposed that the so-called Sheppard-Towner Maternity Bill originated in the Chil-

dren's Bureau. By inference, as Miss Alice Robertson points out in her notable speech against the bill, it was the joint work of Miss Lathrop and Miss Jeannette Rankin, who first introduced it. But this inference is incorrect. Both these ladies undoubtedly assisted somewhat, but the real origin and campaign comes from William Randolph Hearst's magazine, "Good Housekeeping."

According to W. F. Bigelow, editor of "Good Housekeeping" (House Hearing, Dec. 20-29, 1920), the first publicity was sent out by him; "I told the readers of 'Good Housekeeping' they could win this legislation in a week," he said; he asserted that "women were even talking of refusing to bear children unless the world agreed that there should be no more war"; that "with the publicity under way, I next turned my attention to organizations"; but "knowing that the individual counts very little in our system of government, I turned my attention to the executives of the states. First I wrote them giving an *outline* of the bill. As soon as copies were available I sent each governor a copy of the bill," etc.

Observe the "I's" and that *outlines* of the bill were sent out by Bigelow before any printed copies were available—*before it was introduced*. But this is only one item in the evidence that *Hearst* originated the "Maternity Bill."

Another item is this: The executive secretary of the Sheppard-Towner Emergency Committee is one Arnold W. Rosenthal, an assistant editor of "Good Housekeeping." Mr. Rosenthal has not appeared at the Hearings, but has diligently attended to the publicity and "pressure." On August 10, 1921, he also started a propagandist effort for "women at the disarmament conference" ("New York Herald," August 11), claiming that "organizations representing an aggregate membership of about 10,000,000 women" were supporting it. These are the *same* organizations alleged to be backing the Maternity Bill. (Clubwomen might well ask their leaders if Hearst and Rosenthal have been given authority to attach their names to any "publicity stunt" Hearst desires.) Thus from both Bigelow and Rosenthal we learn that the maternity bill agitation is somehow connected with the feminist-pacifist "disarm America first" agitation and while the exact connection here is not as yet known, it is a fact that Germany's first efforts to paralyze Russia "from the inside" were through Madame Kollontai's "most comprehensive" maternity system.

Rosenthal, who seems equally interested in the Sheppard-Towner Bill and the "women on the disarmament delegation," was recently interviewed at the offices of "Good Housekeeping," in New York, by several witnesses. His testimony is most interesting:

"I have been working on it for three years," he said. "*'Good Housekeeping' drew it up and was instrumental in having it introduced*. We spent thousands of dollars advertising it."

When reminded that other magazines had also

advocated it, he said: "*They really have done nothing compared with us.*"

"TERRIBLE OPPOSITION"

Asked as to prospects of its passage, he said: "*There is a terrible tide of opposition from all quarters, but I think it is instigated from the same source and that is the big interests which are against progress. Winslow has determined to kill it and not let it get out of his committee and his committee is with him as far as we can make out. Then the anti-suffragists are opposing it because they are also reactionary. I get clippings from everywhere and the opposition is surprising.*"

He sadly confessed that Dr. J. Whitridge Williams of Johns Hopkins, one of the original star advocates of the bill, had written him that, "the more I go into the question the more I feel that to be tied up with governmental red tape would not be a good thing."

AMERICANS "DOCILE"

"Some people claim we cannot afford it," said Rosenthal, "but that is ridiculous when 93 per cent of our taxes go for war, and millions have been spent and are being spent on the Espionage law, which is an instrument of tyranny and has worked untold hardship. People's opinions are not the business of the Government. The Americans are a docile people and they wouldn't protest against a paltry million that the Sheppard-Towner Bill would cost."

"PRESSURE" AGAINST HEALTH SERVICE

Then came the explanation of a most remarkable performance at the recent House Hearing.

The Public Health Service had been opposing the bill for several days, with a number of its experts testifying against it, including the surgeon general.

Then, as the climax of his appeal, Representative Towner exhibited a letter signed by the assistant secretary of the treasury, in the absence of the secretary from Washington, declaring that a meeting had been held, attended by the surgeon general and Miss Lathrop, and that if the administration were given to the Children's Bureau "the Public Health Service will render every assistance possible to the Children's Bureau."

Who brought this pressure? Miss Lathrop was asked at the hearing by the chairman if she knew of any attempt to make the Public Health Service withdraw its opposition. She declared that she had "heard rumors about it" but had had "absolutely nothing to do with it."

"But *we made the Public Health Service understand that it was better for them not to interfere, and they as well as the assistant secretary of the treasury agreed to its being handled by the Children's Bureau,*" says little Mr. Rosenthal.

"*We*" made them understand! In addition to Mr. Rosenthal's own statement that "we" killed Cock Robin, the October "Good Housekeeping" triumphantly produces a display box, with the head-

ing, "A Splendid Renouncement," giving a paragraph from the letter, with the following remark:

"This statement, part of a letter addressed to the secretary of labor by the assistant secretary of the treasury, was read by Judge Towner at the final committee hearing on the bill. It marked the close of a fight to win its administration by the Public Health Service and remove the last valid objection to the bill raised by Chairman Winslow and members of his committee. *What will the committee and the house do now?*"

ASK ROSENTHAL, HE KNOWS!

Well, the committee could do a lot of things, such as, for instance, call upon little Mr. Rosenthal to tell all he knows about the Hearst "pressure" to make the Public Health Service sacrifice its honest convictions and surrender to the determination of a secret lobby to have the Hearst-Rosenthal Maternity System run by the Children's Bureau.

This is only one phase of the hands of Hearst under the sheepskin of "women's welfare" bills.

A long and conclusive connection between Hearst and the feminist-pacifist group, financially and otherwise, especially politically, must be postponed for a future article. Another incident, however, should be mentioned here.

"It is too bad Miss Lathrop resigned," says Rosenthal. "She was depressed by attacks made on her, and especially on Hull House."

Nobody ever heard of a *successful* general or leader resigning under fire; nor of an absolute commander resigning on account of criticism. The only inference, therefore, that is fair to Miss Lathrop is that she *never was* the actual leader of the Sheppard-Towner agitation, but the sort of vicar general who can be prevailed upon to resign when *the real leaders* so decide.

NO ONE WILL REGRET IT MORE THAN THE MOTHERS WHO SPONSORED IT

If the Sheppard-Towner Maternity Bill becomes a law no one will regret it more than the mothers who sponsored it. The following editorial from the *Miami, Florida, Herald*, is very timely and shows that the laity are waking up to a realization of the danger of uplift legislation:

It is very easy to say as soon as we have determined that something is going wrong, "Let us legislate that wrong out of the way." But as Augustus said, according to Sulpicius, many years ago, "*Festina lente*," "Make haste slowly." In our mad rush to congress for panaceas for this and that social ill, we are rapidly giving up our old-time freedom and assenting to the appointment of inspectors and officials who have no respect for our privacy nor our persons.

That question has already been asked in the debate on the bill to take care of women in childbirth and the picture drawn by Senator Reed is not a pretty one. The whole agitation arose from the fact that someone discovered recently, by what means is un-

known, that 25,000 newly-born children and mothers perished every year needlessly. And we are going to prevent all this slaughter of the innocents as usual by letting the politicians get more patronage and more jobs as if they were not already entrenched with patronage. Take for example the feature of the law which provides that midwives should be permitted to attend only such women as offer every prospect of having a normal labor.

This, as Senator Reed points out, would require a physical examination of the women. In other words, every time there is to be a birth in this enormous country a public official would come into the house, whether you wanted him or not, to tell you if you needed a midwife or a specialist. The following procedure is then suggested: "After a reputable physician or authorized examiner had certified that birth would very likely be a normal one, this could be further checked by the health department providing suitable blanks for the purpose and that they must be returned when the birth certificate is filed. Furthermore, the midwives should be required by law, even in the cases which have been certified as presumably normal, to call a physician whenever labor lasts more than twenty-four hours or any abnormality develops. Such a procedure would have a highly educative effect upon the patients, especially upon the foreign-born." And this is Senator Reed's comment, as printed in the Congressional Record: "Yes, Mr. President, it will have a highly educative effect. It will teach our people to hate the government that invades their homes, that thrusts the ugly face of a politician, who tramped in Washington to get a job, into the sacred chamber of the woman about to give birth to a child." Ah, did the women who so piously followed the lead of the cure-all reformers think of that? To quote Senator Reed again: "To carry out this plan there must be created a vast army of officials, spies, snoopers, tattletales, informers and meddlers. According to the opinions of these reformers and theorists, no housewife can properly cook a meal unless instructed by them. Mothers are incapable of bearing children properly unless they have had at least a few lessons from women who have never given birth to a child." Here is a new light on our dear paternalistic maternalistic legislation.

If the reformers get their way they will soon be employed in sufficient force for the working part of the public to do double duty to let the loafing reformers tell them how best to spend the money which they earn. The reformers need earn no money. They will get paid for preaching like the active Dr. Crafts, who said that reforming was great fun although he did not get more than \$3,000 or \$4,000 a year for his work. Lots of people would do it for less.

But we have ceased to think of freedom. A paid lobby, which sees great rewards if it can get the public so tightly bound that it can get away with anything, is succeeding in intimidating congress and the legislatures which are either so pusillanimous or so

rotten that they accede to every repressive whim of these hypocrites who occupy themselves so much with the good of other people's souls, firmly assured as they must be that their own souls are lily white. It is this that we called a halt on the activities of those who so glibly tell us how to cure our ills without ever having demonstrated their capacity for anything but endless talk and endless denunciation.

If the maternity bill becomes a law no one will regret it more than the mothers who sponsored it.

STATE SUBSIDIES A REAL MENACE

THE FEDERAL DEPARTMENT OF EDUCATION AND SHEPPARD-TOWNER BILL MUST BE DEFEATED

Resolution adopted by the National Conference of State Manufacturers' Association, September 30, 1921, at the Congress Hotel, Chicago.

WHEREAS, The appropriation of money by the United States as subsidies or "Aids" to state and local governments, results in confusion of national and local finances and encourages waste and extravagance, and

WHEREAS, Two measures now pending in Congress—The Smith-Towner Bill for a so-called Federal Department of Education, and the Sheppard-Towner Maternity Bill—would, together, nearly double the present \$113,000,000 of existing Federal "Aids" for roads, agricultural promotion and other purposes; would increase rapidly in amount and would pave the way for more and more federal appropriations to State and Local governments, and

WHEREAS, the further extension of this policy will make the peace time tax burdens of the future greater than our taxes for war purposes, therefore, be it

Resolved, That we oppose the creation by Congress of any new Federal "Aids," grants or subsidies toward the expenses of state and local governments.

ANOTHER RESOLUTION CONDEMNING SUBSIDIES

Resolutions adopted at the Fourteenth Annual Tax Conference held at Bretton Woods, N. H., under the auspices of the National Tax Association and adopted September 16, 1921, representatives from thirty-eight states being present:

Resolved, That this conference recommends that pending

First, a thorough investigation of the field of federal grants and subsidies to state and local governments and

Second, the settlement by the United States government of a sound national policy fixing the character and purposes of governmental activities to be undertaken by the federal government and for which money properly may be appropriated out of the United States treasury, no new legislation, except affecting public land states, creating such "aids," grants, or subsidies to the states and their subdivisions be enacted.

LYING PROPAGANDA ONCE MORE—THE SOUTH IS WAKING UP AT LAST

THE SOUTHERN STATES PELLAGRA FIASCO

Neasco, an unwarranted one, attaching to itself irremedial injury to a section of the United States wholly undeserving of the treatment born of misinformation, overzealousness and possibly more or less desire to bask in the limelight of publicity, is the only verdict possible as a result of the recent newspaper notoriety given the subject of alleged widespread ruin and fatal epidemic of pellagra over the southern states. Those in position to know the situation, men of scientific ability, students of the disease for years, on the ground and familiar with the actual conditions, feel justly outraged at the situation which has been created by premature announcement of existence of relatively, an insignificant number of cases. Seale Harris, Editor and Secretary of the Southern Medical Association, the largest organization and Journal in the country, except the A. M. A., who has made special studies and researches for years on the subject of pellagra, states in his September issue that if the people of the Northern states were aware that there were less than 10,000 cases among the 35,000,000 people there would be no more concern over the matter. He also writes that the South has been irreparably damaged from an industrial standpoint in that thousands of white laborers, immigrants who otherwise would go to the South and find employment in development of its great resources are deterred from so doing by the sensational news they read. He takes a just, but severe rapt at Goldberger, who he states is to be the "Moses who will lead the half starved Southern people out of the wilderness," who had also prophesied that the epidemic would recur in 1921. Dr. Harris proclaims that the "half starved" people concerned are eating three well balanced meals daily, but they refusing to heed the prophet's warnings, Goldberger had appealed to the authorities at Washington, and they forthwith sent the edict broadcast, that the multitudes in the South, even though they do not believe they are in the midst of famine and plague must be saved by a paternal government. Dr. Harris, further noting Goldberger's claim that the etiology is due to an unbalanced diet, which claim had been brought forth by Deeks at the Canal Zone in 1908, six years prior to Goldberger's "discoveries," the latter, "Due to very clever propaganda Goldberger's theory has been accepted by many physicians." "Many others, however, both before and after Goldberger's theory was announced, believed that malnutrition is an important predisposing factor in the production of pellagra, as it is in tuberculosis; and that the primary cause is probably a gastro-intestinal infection of some sort." Dr. Harris further says: "Since so much has been said about Goldberger's experiments, which by the way have not been verified by others, they should be repeated by an expert in nutrition like McCollum, collaborating with bacteriologists and epidemiologists to prevent possible infection." It has been

pointed out by those who do not believe in Goldberger's theory that his experiments were carried out in the state in which pellagra was most prevalent; and that those on whom experiments were made may have been infected by some organism in the food, or the infection may have been carried by an insect. They therefore believe that before Goldberger's theory is accepted his experiments should be carried out during the winter months in Maine or North Dakota or in some other state in which there is no pellagra."

Dr. Harris himself happens to be no ordinary authority on the subject of pellagra. Carrying out experiments both before and after the World War in Europe. He calls attention to the food and nutritional conditions of the populations of Germany, Belgium and France: "were half starved, having lived for years on an unbalanced diet, low in proteins and in butter fats, yet pellagra does not exist in those countries. Tuberculosis, scurvy and other diseases, in which a deficiency diet is an important predisposing etiological factor, had increased; but it seemed that the infection or something besides a deficiency diet, was not present in those countries, or there would have been many cases of pellagra." Dr. Harris, one of the South's most agreeable, able, courteous, manly men, seems "peevish" over the whole thing, and especially the methods used by which injurious results have been created. We agree that some one either in misguided enthusiasm or deliberate and reckless disregard of results, so long as the publicity craved was the end, has distorted the actual conditions beyond any reasonable acceptance. We of Oklahoma, so far as a brief inquiry shows, had about forgotten pellagra, over which, a few years ago, there was furor far out of proportion to the conditions existing, an importance like unto a mountain out of a mole-hill being the actual state of affairs, until we were suddenly electrified into a state of reserved scepticism, this time, applying a proper caution to the press dispatches picturing the horrors existing, always, "somewhere else," never a tangible fact to convince the doctor that ruin stalked on every side, but always "reports" from the other locality. Digesting such public health reports as were available for Oklahoma, nothing startling or alarming is to be seen, conversing with physicians whose work carried them over a wide scope of country, they had observed no rise in number of sufficient gravity to excite alarm, so, where does this Will o' the Wisp hail from. The only solution of the origination of the sensationalism lies in the belief that some one spoke without the book. We hope the Surgeon General will cause an investigation of this made, and then on the findings do the right thing. We have had too much of experience wherein such wrongs have been allowed to go unrighted simply because some official of the Public Health Service might be humiliated by a proper placing of the responsibility. If the Public Health Service wishes to retain the respect of the profession which has always given it loyal support in the hour of need, then we expect these sectional slanders and libels to cease.

This seems to be the opinion of every editor whose state is involved in the matter.—Journal Oklahoma S. M. A.

DOCTOR, YOU HAVE A COPY OF THE MEDICAL REVIEW OF REVIEWS COMING

100,000 COPIES WILL BE SENT OUT THE FIRST OF THE YEAR

The January issue of the *Medical Review of Reviews* is to be sent as a New Year's gift to practically every physician in the United States and Canada. This issue will be one of the most valuable which has ever been prepared and we trust that the physicians who receive this number will read it with interest and profit.

We congratulate the *Medical Review of Reviews* on this progressive move and trust they will meet with success in a great undertaking.

IS THE PROFESSIONAL PERFORMER A PERVERT?

THE PSYCHOPATHOLOGY OF REFORMERS

The professional reformer often has a mentality in which the psychic urge proceeds from the mental pain inflicted on others. This is akin to sadism and may be associated consciously with pornolagny (sex enjoyment from the obscene). While not demarcating these states, Dr. A. A. Brill clearly discusses them in a recent contribution to the psychopathology of the reformer. "The basis of the principles," remarks Brill, "is the association of abnormal contrasts. A man who is always painfully good is likely to be at heart bad. . . . One who is forever looking after the moral welfare of others and trying to make sure they commit no sins, is himself likely to have a mind which would not bear public inspection. It can be set down almost as a certainty that the abnormally good person, the self-righteous person is pursuing virtue madly because, instinctively or unconsciously, he is the reverse of good. He is constantly imbued with the feeling of sin, and in self-protection he throws his tendencies to evil in the opposite path, which is all very well if he does not go too far with it. I am compelled to look with suspicion on anyone, other than those training for some definite religious calling, who devote over-much study to religion. It is an indication that he is conscious of great sin in himself.

"And as to the man or women who is trying to reform everybody else—look out! Not only is it almost perfect proof that he is unhealthily anxious to do the same things that he seeks to prevent others from doing—it shows traces of other ugly traits as well. The man who sees evil in pictures of nudes, who is distressed by every reference to sex in books and on the stage, and who rails at short skirts and scanty bathing suits is showing a decided trend toward pornophilia—the love of the libidinous. The man who is constantly finding

indecent in people and things about him is convicting himself of perversion. If he were not strongly attracted by the unclean, for the very sake of uncleanness itself, he would notice little of the things that now shock him. I have been much interested to learn that two conspicuous professional reformers have large collections of obscene pictures, to which they are adding constantly, and which they exhibit occasionally to those they think sufficiently pure in heart not to be harmed. That seems to me strikingly significant.

"An audience listening breathlessly to a reformer describing the iniquities of the outside world is a valuable study. The fascinated hearers are deriving vicariously the same pleasures that an audience at a crook play gets when it applauds the exploits of the lawbreaker instead of those of the detective who represents law and order, thus expressing its repressed anti-social nature.

"There is a marked trace, too, of pathological aggression in the make-up of many professional reformers. They actually obtain morbid pleasure in dominating others, in making others do their bidding and in building up a barrier of thou-shalt-nots against everything they find pleasant to people not like themselves. On the other hand, their own unconscious guilt stimulates them to do penance and compel others to do penance likewise. This is illustrated clearly in a certain type of super-virtuous person who gloats over his own self-denial. This type is analogous to the 'holy men' of the Middle Ages who flagellated themselves and were revered for their godliness. They were not godly at all. They were simply perverted, victims of masochism.

"Our newspapers only too often carry accounts of excessively good persons suddenly going wrong—such as the suburban minister who devoted much of his attention to reforming and to whom citizenship was denied because of his immorality. The public always reads these accounts with shocked surprise, but the lapses of these people do not in every instance indicate that they are hypocrites. It is usually a case of their repressed desires, which they have sublimated into some opposite channel, becoming so strong that they overflow the channel and burst out through the primitive path."

—Urological & Cutaneous Review.

REGULATING EVERYTHING PERTAINING TO THE CONDUCT OF THE AMERICAN PEOPLE

SHOULD TAKE A REST

As a matter of fact it is about time that regulating everything pertaining to the conduct of the American people should take a rest. We have had enough regulating to last us for the next hundred years, and some of the vicious legislation and its by-products, due to the efforts of the uplifters and faddists, either will have to be wiped off the statute books or ignored if we are to have any peace in our daily lives. The trouble of it is a lot of legislation which looks inno-

cent enough when it is proposed, either is found to contain a "stinger," or is but an entering wedge for something that is positively vicious. As an instance of this we have but to cite the Sheppard-Towner bill which, thanks to the efforts of the rational-minded in the medical profession, seems doomed to defeat, and the various compulsory health insurance bills. Lastly, we have the bills which will serve as amendments to the Volstead Act, or perhaps we might say, adding stringent regulations to the Act, under the terms of which alcohol in any form would not be used in the arts and sciences. There is an old saying that if you give a calf enough rope he will hang himself, and it is hoped that a lot of these wild-eyed reformers who are trying to regulate everything under the sun, will hang themselves through their over-activities. There will come a time when the American people will rebel against the idiotic and inconsistent restrictions proposed by the fanatical reformer.—Indiana State M. J., July 15, 1921.

IDIOTIC GOVERNMENT REGULATIONS

As an example of the idiotic inconsistency of some of our governmental regulations we can point with pride (?) to the ruling of the Internal Revenue Department to the effect that narcotic inventories, under the Harrison Antinarcotic Law, covering the period from January 1 to June 30, inclusive, must be in the Internal Revenue office on July 1 or a penalty will be assessed. A doctor residing in South Bend or Evansville will have a sweet time getting his opium inventor into the Internal Revenue office at Indianapolis on July first if he carries the report up to and including the thirtieth of June. Even admitting prompt mail service, and "there ain't no sich animal" any more, a report mailed in Evansville, South Bend or Fort Wayne at midnight of June 30 would not reach Indianapolis on July 1. Last year the editor of THE JOURNAL reported on a few hypodermic morphine tablets and the usual amount of cocaine used in local anesthetic work, but in reporting up to and including June 30 his report reached Indianapolis about July 2 or 3, and he was penalized very promptly for failure to get the report in on July 1. No explanation was offered to the inquiry as to how a report covering the period up to and including June 30 could be gotten to the Indianapolis office within the few hours allowed. We hear that there are others who have had a similar experience. We are not bolsheviks, but we would like to see a little common sense pounded into the heads of those who are elected or appointed to serve the American people.—Indiana State M. J., July 15, 1921.

SIGNIFICANCE OF A NEGATIVE WASSERMANN

While few bacteriologists hesitate in accepting a diagnosis of syphilis on the basis of a positive Wassermann reaction, opinions differ concerning the significance of a negative reaction (*Aus. Med. Jour.*) The significance of this reaction has been investigated by P. Fildes and J. G. Parnell at Haslar and their deduc-

tions form a special report of the Medical Research Committee. The persons subjected to the test are singularly unsuited for the purpose of determining the significance of negative responses to it. They consisted of sailors known to be suffering from syphilis or suspected of having been infected. The authors accept as positive evidence of infection the discovery of the *Spirocheta pallida* and also the presence of a chancre with all the attributes of a Hunterian sore, the presence of typical syphilitic rashes and certain abnormalities of the central nervous system. In addition they accept a history of a sore followed by a rash as evidence of syphilis, especially if the previous treatment was by some arsenical or mercurial preparation. The critic is justified in questioning the reliability of this evidence. When they are prepared to regard a previously conducted Wassermann test as presumptive evidence, the critic will be inclined to question whether the subject has been seriously studied. In the next place they regard the appearance of typical syphilitic signs after a doubtful lesion has been treated as evidence of syphilis.

SALVARSAN IN CANADA

According to a recent writer (*Med. Record*) a good deal of discontent has been expressed in Canada recently with regard to the regulations regarding the manufacture and importation in Canada of Salvarsan and allied products and other arsenical preparations employed for the treatment of syphilis. It is generally thought by members of the Canadian medical profession that permission should be at once granted for the manufacturer of Salvarsan or similar preparations. All German patents should be regarded as forfeited by the war, and articles made under patents granted by the Canadian Government to citizens of Germany should now be thrown open to Canadian enterprise and capital. This should include all drugs, chemicals and dyes. The medical profession of Canada and Canadians generally are of the opinion that the Germans should not be let off lightly. They forced the war upon the world and caused an awful cost of life and treasure and should not be allowed to resume pre-war conditions. There seems to be a tendency now to let down Germany easily. This view, however, does not hold in Canada.

EFFECTS OF ARSPHENAMINE

According to Dinnick (*Lancet*) the intravenous administration of the arsenical compounds is accompanied by a slight fall of blood pressure, probably due to the general, but transient, vaso-dilator action of the drug. There is an appreciable leucocytosis and some diminution in the red blood cell count. The capillary changes are marked, and in fatal cases death is due to capillary hemorrhages and accompanying serous exudation, and not, as formerly believed, to liberation of endotoxins from dead spirochetes.

The drug disappears from the blood in a few hours; traces may be detected in the urine up to ten days, but arsenic can be found in the organs after many months,

especially in the liver. Excretion is largely by the bowel and much less by the kidney, a reason for previous knowledge of the state of these organs. Probably the therapeutic effect is only exerted during the short time the drug is circulating in the blood stream. If this could be proven it would guide us to a better method by smaller doses at shorter intervals, but maintaining a strict watch upon the total amount of arsenic given.

A WARNING AGAINST EXTRAVAGANT CLAIMS FOR X-RAY TREATMENT OF CANCER

OUR LONDON LETTER

(From Our Own Correspondent)

London, September 1, 1921.

The Council of the British Association for the Advancement of Radiology and Physiotherapy have issued a statement to the effect that in view of the publicity that has been given to radiotherapy in the treatment of cancer by the publication of laudatory articles in the medical and lay press, and the extraordinary claims that have been put forward by the authorities of the West London Hospital, it seems advisable that a considered statement on the use of these agents should be made. The treatment referred to has not yet been thoroughly tested. It possesses great potential dangers, and may not prove as efficacious as the claims now made would suggest. In the nature of the case, however, no certainty can be arrived at for some years. The unwarranted laudation of this change in technique will probably lead to a reaction, and bring discredit upon x-ray treatment in general. The claim put forward by the Erlangen School is that by means of their special methods it is possible to administer a dose of x-rays which will cure cancer in one application. The *Lancet*, in a leading article in its issue of July 2, commented in somewhat caustic but well-advised terms on these distinctly premature statements, concluding in these words, "We wish to say once more how much it is to be regretted that hasty opinions on medical matters should be given wide publicity. Such pronouncements, unless authoritatively traversed, could not fail to be harmful to the future of radiology, in that they raise hopes which are far from certain of realization. X-rays have already relieved suffering and prolonged active life in thousands of cancer victims. They have even effected a few apparent cures; and their value in helping to prevent return after operation is now generally recognized. It would, therefore, be neither more nor less than a calamity if public disappointment resulting from unfulfilled promises were to bring discredit on radiation therapy, which is in reality a powerful agent in the warfare against disease." This expression of opinion is very much to the point. A great many of the reputed cancer cures and most of the widely heralded consumption cures hail from Germany. Of course, x-rays have proved themselves of great value, and the merit of the much-discussed Erlangen apparatus consists mainly of its

greater penetrating powers. However, that is no valid reason why preposterous assertions should be made concerning its curative effects, bringing oft-times calamitous results on the sufferers and to the great detriment of a means of treatment which, judiciously employed, promises to become of the greatest service to diseased humanity.—*Medical Record*, Sept. 24, 1921.

THERAPEUTIC VALUE OF SOME COMMON FOODS WITH SPECIAL REFERENCE TO YEAST

RALPH EVERETT LEE, M.D.

The science of nutrition and dietetics has been immeasurably advanced in the last few years by the discovery that many common foods possess a therapeutic or medicinal value as well as a food value. In fact, the curative action in many cases is of far greater importance than the caloric or the tissue building function.

While the recent studies of the relation between food quality and growth have greatly complicated our conceptions of food metabolism, they have shed a flood of light on the causes and cure of many hitherto obscure conditions, some indefinite such as malnutrition, lack of appetite, general debility, failure to grow, lowered vitality and some very definite diseases such as beri-beri and scurvy and possible rickets and pellagra.

These are all abnormal pathological conditions, all result in premature death and all may be cured or prevented by a change of diet or the addition of foods possessing known therapeutic value. There is no sharp line of demarkation between food and medicine.

The desire for fresh succulent fruits and green leafy vegetables is no mere whim of the appetite but is a natural instinct implanted through ages of selection. The preservation of the race, mental progress and the advance of civilization is not possible without them. Where these things are lacking a disease known as a scurvy lays low its victims with tender swollen joints, soft bleeding gums, loosened teeth, lack of appetite and an ugly ill-tempered disposition followed by a general physical breakdown.

THE CURATIVE AGENT

With the juice of the orange added to the food these symptoms rapidly disappear. The patients become more cheerful, the appetite returns, the tenderness of the joints vanishes, the gums harden and the patient is cured. The orange has sugar, but sugar will not cure scurvy. The orange has organic acids, but acids will not cure scurvy. The orange has mineral salts, but mineral salts will not cure scurvy. The orange has some protein, but protein will not cure scurvy. What, then, is the curative agent?

Its chemical composition is unknown, but pending further investigation it has been given a name, the water soluble C or anti-scorbutic vitamine. It is

present in fruits, vegetables and raw animal fat, especially that around the kidney and in some of the glandular organs.

It is practically absent in seeds, cereals, beans, lean meat and it is easily injured or destroyed by prolonged cooking.

Infants developing scurvy will almost invariably be found to have been brought up on pasteurized milk. Fresh raw milk will quickly cure infantile scurvy. It is usually necessary to pasteurize milk, but infantile scurvy may be avoided by small daily doses of orange juice, tomato or potato water.

Another vitamine known as the fat soluble A is absolutely necessary for growth, and seems more important in the diet of the young. It occurs chiefly in the butter fat of milk and in the green leafy vegetables. The diet of the growing infant should consist almost entirely of milk not only on account of its perfect tissue building protein, but also for the fat soluble vitamine it contains. If additional energy is necessary as the child grows older there is no better or cheaper source than bread. "The diet of the American people should be built up around bread and milk."

Until recently a disease known as beri-beri was very prevalent in the Far East, and it is not uncommon at the present time. In an acute form it is manifested by extreme emaciation or sometimes a sort of dropsy, loss of appetite, low vitality, diminished resistance to disease, sterility, and paralysis beginning in the legs. Cases have been reported from various parts of America. That it is very common in a mild, incipient and generally unrecognized form is shown by the enormous number of cases which show marked improvement in the general health when there is added to the diet foods which the therapeutic power of preventing and curing advanced cases of beri-beri.

MAY BE CORRECTED BY PROPER FOODS

As in the case of scurvy it has been shown that beri-beri is cured by those foods which contain a compound known as the water soluble B or the anti-neuritic vitamine. However abundant and complete a diet may be, if it lacks or is poor in water soluble B there appears, in the young, failure to grow, and in both old and young all the symptoms enumerated above under beri-beri, the severity of the disease depending on the degree of deficiency of this vitamine.

Fortunately for the human race, water soluble B is not as easily destroyed by ordinary cooking as the antiscorbutic or the fat soluble vitamins, nevertheless, the increasing use of highly refined, sterilized and artificially prepared foods has placed civilized man on a ration exceedingly low in this necessary factor. It occurs in whole cereals but not in the refined flours. It is found in the sugar beet and cane, but is absent in refined sugar. It is not very high in milk, practically absent in meat and fish, but abundant in many fresh vegetables such as tomato and spinach.

Hence it is possible for a man literally to starve to death on three full meals a day. The researches of numerous investigators have placed our knowledge of vitamins on a very firm foundation.

Now yeast contains from four to six times as much of this anti-neuritic vitamine as any other food and it is undoubtedly due to its high vitamine content that this long familiar product possesses such remarkable therapeutic properties.

One of the first symptoms of lack of vitamine (avitaminosis) is loss of appetite. This is followed by loss of weight, lowered vitality and a whole train of conditions, which might all be brought together under the general term malnutrition. This symptom complex, constituting avitaminosis owing to the obscurity and variety of its manifestation in many cases would be difficult to diagnose were there not at hand the ready therapeutic test, namely, the administration of fresh yeast. If there is a gradual abatement of the symptoms, the pathological condition is undoubtedly caused by a lack of vitamine. In such cases the administration of yeast is followed in a few days by increased appetite, a better utilization of food, a gradual gain in weight, improved color, and a return of physical and mental vigor and exuberant good health.

EFFECT OF YEAST IN THE DIET

The administration of yeast can only be attended by good results. It is a microscopic vegetable, a plant that is grown in a water extract of the best selected grains, corn and barley malt from which it absorbs and concentrates the vitamins of the grains.

Besides supplying vitamins, the balance of its substance consists of a readily assimilable food material. Its protein, constituting fifty per cent of the dry matter, is available for the building of tissue, its glycogen and fat serve as a source of energy and its ash consists chiefly of phosphates.

The quantitative determination of vitamins in foods is a difficult procedure, and our knowledge of the vitamin requirements of the human organism is very meager. We only know that enough should be taken to prevent a decline in appetite, weight and general health and that we cannot get too much. That many of us are getting along on less than a minimum amount is shown by the benefits derived in a vast majority of cases by the addition of an ounce to an ounce and a half of yeast to the diet.

USE OF YEAST NOT NEW

The use of yeast as a curative agent is not new. It is mentioned by Hippocrates and Galen; and Pliny, the Elder, writing in his *Natural History*, says that the women of Nero's court used yeast to improve their complexions.

The first scientific investigation of its medicinal properties is reported by Moss of England in 1852 and an account of his work appeared in the *London Lancet* of that year. From that date to the present time numerous articles have appeared in the medical press of every land attesting the therapeutic value

of yeast but by far the most careful, painstaking and elaborate piece of work was that done by Hawk and others in the Jefferson Medical School and reported in the *Journal of the American Medical Association*. They not only prove the value of yeast in cases of malnutrition and allied conditions due to the lack of sufficient vitamins in the diet, but also demonstrated, beyond all question, the great importance of yeast in the treatment of skin infections, particularly boils, carbuncles and acne. That this almost specific action may not be due entirely to its vitamin content seems possible from the fact that these results are not, so far as we can learn, brought about by other foods merely rich in vitamin.

Research work is now being carried out to determine the action of yeast in these cases, and if it should be shown that a food product taken by mouth will actually increase the bactericidal power of the blood it will be a very real and important contribution to medicine.

It was also found that yeast while not in any sense a cathartic aids in the elimination of waste and is an effective remedy in many cases of constipation.

A very definite result of the addition of yeast to the diet is a marked increase of the appetite accompanied by perfect utilization of food both of which contribute to physical and mental well-being.

YEAST NOT A "CURE-ALL"

Yeast is by no means a "cure-all," the eating of yeast is not a fad, it should be used with discretion and good results may be expected in those cases in which it has been proven of definite value. Its relation to the regular diet is analogous to that of orange juice, butter, milk, eggs or bran bread. It fulfills a different but not less important role than these, in that it furnishes in abundance the necessary water soluble B.

Its use is recommended by the majority of physicians in three classes of disorders: as a general tonic in malnutrition and lowered vitality due to insufficient vitamins in the diet, in acute skin infections such as boils, acne and carbuncles, supplemented when necessary by appropriate local treatment, and in sluggish action of the bowels.

Yeast has been eaten in bread since the dawn of history and it should be remembered that yeast is a food—not a medicine—that it is better to take yeast as a preventative measure than to wait until some serious disorder makes medicinal treatment imperative.

The advance of civilization in any direction demands constant readjustment of the habits of each individual and the interdependence of apparently unrelated industries is nowhere exemplified more clearly than in the case of the food supply of the nation.

The so-called "deficiency diseases" described above are the results of the failure of the individual to find the proper method of readjustment to conditions which have come to stay.

Widely separated centers of food production and demand have resulted in long transportation and the equalization of distribution throughout the year so that foods gathered in time of plenty can be released when "out of season" have both made necessary longer periods of storage.

The storage of foods has been rendered possible by their constant refinement and purification in the process of which the vitamins have been unavoidably in the case of many foods partly destroyed or removed.

It is imperative that they be replaced and the proper readjustment to meet this condition is in the careful selection of foods rich in these necessary factors.

Butter, whole milk and green leafy vegetables are rich in the fat soluble, growth promoting vitamin, fresh fruits contain the antiscorbutic factor, and yeast, the richest of all vegetable foods in antineuritic properties is the logical source of additional water soluble B.—*The American Food Journal*.

HYSTERICAL ANTIVIVISECTION

San Francisco, Cal., March 17, 1921.

To the Editor: In the *Country Gentleman*, October 16, 1920, is an article by Albert Payson Terhune, entitled "Vivisection."

Were it not for the fact that the *Country Gentleman* is an agricultural journal with a huge circulation, and ordinarily credited with good reading matter, we might ignore the irascible tirade of Mr. Terhune. However, as his article is such an unjust attack upon the medical profession, and goes to so many readers who will never hear or know the truth of the matter, it should be promptly dealt with by every medical journal in the United States.

Mr. Terhune either affects an ignorance or is ignorant to a pitiable extent in his attempt to speak of vivisection. He writes about the awful experiments in vivisection that are done by surgeons at their "clinics." He presumes not to know the difference between a surgical clinic and a research laboratory. Almost any man of ordinary intelligence ought to know that no animal, domestic or wild, would be tolerated in a surgical clinic today for sanitary and surgical reasons. Anyone of average intelligence knows that a surgical clinic is for the care of afflicted human beings and not a place for biological, pathological, physiological or bacteriological experiment.

Mr. Terhune mentions a puppy that is supposed to "have been tossed out of the clinic window to die." He further states: "Every torturing wound that can be inflicted on any creature—every torment that so-called human ingenuity can frame—had been wreaked on the luckless pup." That must have been a big pup. According to Mr. Terhune's further statements, only a few of which would make it certain that this "luckless pup" had "his lips sewed together, windpipe dissected out,

and a large hole put through it and lifted, and a large nail passed across it from behind." He says, "Dupuytren used to cut the recurrent laryngeal tubes to make the beast dumb." (The recurrent laryngeal tubes are anatomical structures that exist only in Mr. Terhune's imagination. The recurrent laryngeal nerve is well known to surgery. It is also well known that to tamper with this nerve is, even without severing it, immediately dangerous to life.) To continue, this pup must have had his scalp dissected off, his skull opened, his brain cut and meddled with, his spinal cord laid bare and scratched with instruments, then beaten on the head to make him refrain from howling, although his windpipe had been put out of commission; his chest ripped open and heart manipulated, instruments plunged into his blood vessels; his abdomen widely opened, and boiling water poured on the bowels, and many other awful things perpetrated on and in his body.

Mr. Terhune mentions "a hundred or more operations that might be performed"; he says the dog had everything done to him, so he must have had a hundred things done to him at least. In spite of all this, by the kindly aid of an unskilled woman and some of her neighbors, this cut, scalded, mangled, dismembered pup recovered and had his picture taken, and some of his friends presented an enlarged photograph to Mr. Terhune. He does not say whether or not the lady and her neighbors used an anesthetic while they resurrected and reconstructed the pup.

He speaks about baking and boiling dogs for experimental purposes, and also makes the assertion that "criminals had been turned over to the surgeons for vivisection purposes." That gentleman ought to know that live human beings have never been submitted to the medical profession for purposes of vivisection. Such a thing is illegal and would subject any or all individuals participating in such an unheard of orgy to a long term of imprisonment for the crimes of mayhem or manslaughter.

He writes of the doings of Magendie, French physician and physiologist, born 1783 and died 1855; Dupuytren, born 1777, died 1835; Claude Bernard, born 1813, died 1878, and Sir Charles Bell, born 1774, died 1842. He represented these men as of the present time, and misrepresents them as having committed all the atrocities which have been evolved from the tormented imaginations of anti-vivisectionists.

He mentions as being opposed to vivisection, "Mark Twain, Bismarck, Henry Ward Beecher, John Bright, Luther Burbank, Thomas Carlyle, Gilbert Chesterton, William James, Cuvier, William Lloyd Garrison, W. D. Howells, Humboldt, Cardinal Manning, Henry Van Dyke, Stanley, General Sir Evelyn Wood, Lord Wolseley, Scott, Bernard Shaw, United States Senator Myers, and thousands of other great minds, among them innumerable famed surgeons and doctors." Of those whom he

mentioned by name, none of them were medical men, and it is quite likely that not one of them ever visited a laboratory where vivisection is practiced, and knew nothing about it except by hearsay. Many of them are dead and cannot express themselves as to the truth of his assertion. He does not mention who the "innumerable famed surgeons and doctors" are. That statement is on a par with his pup story.

The whole vicious article breathes of insincerity, evasion and misstatement, to say nothing of gross lack of information. It is evident that it is to mislead and not to instruct. He forgets to mention the ladies who stand on street corners wearing, for ornamental purposes only, the skins and feathers of unfortunate birds and animals, while these ladies besiege the population for aid to the cause of anti-vivisection. He seems to forget the farms where animals are grown to be knocked on the head and skinned to provide furs which are more or less useless adornments of our present day ladies. The carcasses of these animals are wasted along with their lives. His whole article tends to bring down unmerited condemnation on the medical profession by accusing them of practicing unheard of brutality upon the lower animals as well as mankind. No sane human being would do otherwise than condemn the unspeakably unnecessary brutalities mentioned by Mr. Terhune, and which are not done in laboratories connected with medical schools or by members of the medical profession. Whatever he might dig up as done without anesthetics was before the days of anesthetics, when surgical operations were performed without anesthesia from force of circumstances.

The management of the *Country Gentleman* refused to print a review of Mr. Terhune's article. They stated that they were going to have "the other side" presented by some well known man in the medical profession. Quite recently they published a most excellent article by Dr. W. W. Keen of Philadelphia. To be sure, Dr. Keen's article was everything that it should be, coming from so great a surgeon and so great an authority. The incongruity of it was the pitting of what we might call anarchistic, pretended or congenital ignorance, supplemented by a total lack of regard for accuracy against one of the greatest and best informed men in the medical profession of the world. It would be regarded as most ridiculous to pick up a hoodlum and a blackguard and pit him against a master of theology in order to demonstrate both sides of a matter concerning religion or morals.

The writer has been informed that the *Country Gentleman* received about a thousand letters, ninety-five per cent of which endorsed this scurrilous vaporing exhibited on the part of Mr. Terhune's article. This shows to what an extent public sympathy may be excited when appealed to through misstatement and prejudice.

The vicious misstatements, the publication of half

truths and nontruths, are directed against the medical profession in a most unjust and uncalled for manner. If the medical profession does not take up the matter and fight for the good repute and welfare of its own members, it is certain that none of the popular magazines or daily newspapers are going to do it.—*New York Medical Journal*.

PROHIBITION AND THE PRACTICE OF MEDICINE*

ALEX. W. ACHESON, M. D.,

DENISON, TEXAS.

We have had many observations by incompetent persons on the effects of alcohol and enthusiasts have the country so cowed that hardly any one dares publish anything unless it leans strongly toward the opinions of those who hold that alcohol can only cause harm.

In my opinion the Prohibition Act was passed under a misapprehension, in that the public was not informed as to the effects of alcohol. This view is supported by the following:¹

"The legal controversies and the debates that have been initiated by the enforcement of nationwide prohibition in the United States have unexpectedly emphasized that many of the essential facts regarding alcohol and its action are not yet known to science. This is surprising in view of the extent to which alcohol has been and still is being consumed by man. Nevertheless, it is true that there exist scarcely any manuals which may be referred to by the general reader for authoritative statements of unbiased experts regarding a subject of such widespread interest. Most of the evidence is tinged either with the prejudice of the temperance fanatic or the insidious propaganda of *ex parte* influence."

From the same source we find, according to the Advisory Board of London, that alcohol taken with food is absorbed more slowly than when it is drunk on an empty stomach.

Alcohol in beer does not have the same effect as alcohol otherwise taken, not even when the quantity is the same.

It is further stated: "Practically all of the available data of experimental work done prior to 1919 refer to relatively strong solutions of alcohol." Deductions from such data are necessarily inaccurate and inconclusive.

No thoughtful person will deny the pernicious influence of excessive use of alcohol, or of even moderate use in some individuals, yet physicians acknowledge it is the most potent harmless germ killer at their command. By harmless is meant non-poisonous when externally applied and properly diluted.

Attention must be drawn to the danger of denaturing alcohol or alcoholic preparations, in which process a remedy recommended in the treatment of disease is converted into a deadly poison. One may read daily in the press of blindness, paralysis or death from wood alcohol poisoning, caused by drinking concoctions wherein wood alcohol has been added or substituted for grain alcohol.

It will be claimed that the law does not prohibit the procuring of alcohol for medicinal use. Yet the doctor who attempts to prescribe it is subjected to harsh rules and required to take out a permit; the druggist is placed under bond, while the railways are not permitted to transport it except under irksome conditions. For these reasons alcohol cannot be obtained by physicians in small towns and on some lines of railroads. The requirements in force are so onerous and the danger of prosecution so great for even the slightest irregularity on the part of the doctor or druggist that both hesitate to handle alcohol.

Alcohol is a germ killer, and laudanum a pain killer. When these are denied a country swept by an epidemic of influenza the results are appalling. The large mortality is lamentable enough, but it is more disturbing to think of the torture endured by the thousands because laudanum was put beyond reach and they were driven to headache powders which produce cyanosis and prostration.

This epidemic germ disease came at a time when the country was undergoing the experiment of abolishing a potent germ killer. Nearly 100,000 lives were lost. Could these two facts have any connection? Is it possible that depression follows abstinence from an accustomed stimulant? As a result of this depression is not an individual more susceptible to infection? In the million cases of influenza were any lives prolonged by the absence of alcohol? The United States Government shipped 40 barrels of alcoholic liquors into a Kentucky army camp contrary to the laws of that state. Has the Government any more right to distribute a half million doses of germ killer than the individual citizens?

We have another efficient germ killer in quinine. In certain conditions of the stomach in bilious fevers quinine will not be dissolved. If accompanied by whiskey toddy it is dissolved and absorbed, the drug carried through the body and the fever conquered. Without attributing any curative qualities to the whiskey its usefulness in dissolving the quinine must be conceded. In 1869 there was a craze over the country concerning tannate of quinine. The tannic acid rendered the quinine tasteless, or almost so.

It is impossible to calculate how many hundreds lost their lives; how many thousands had their fevers prolonged; how many families impoverished by this derivative of oak bark, for the reason that quinine tannate is insoluble and therefore inert. The lives lost because of this experiment could

*Read before the Section on State Medicine and Public Hygiene, State Medical Association of Texas, Houston, April 23, 1920.

1. *Journ. A. M. A.*, Vol. 74, No. 74, p. 464.

have been saved by the use of whiskey instead of the oak bark. Such a little thing will turn a life-giving principle into a death-dealing element; the withholding of a chemical atom may convert a blessing into a curse.

Let me give my experience in two cases. A child with diphtheria was treated with antitoxin, following which came debility, resisting every remedy, to be succeeded by nausea and intractable vomiting. As a last resort it was decided to administer champagne, but none could be had. If that remedy could have been secured it might not have saved the child's life, but under such circumstances have we a right to withhold the remedy?

Outbreaks of scarlet fever are frequently experienced in almost every community. During the course of this disease the kidneys often become involved, producing dropsy which overwhelms the patient. At this point one successful method of treatment consists in saturating the patient with champagne, in order to neutralize the toxins, which the kidneys are unable to eliminate. In many cases in which this has not been done death has followed from convulsions or hemorrhage from the fauces. The use of this treatment is now impossible because champagne cannot be obtained.

When the pioneer crossed the plains he hobbled his mules at night so as to be able to find them in the morning. That is the way the laws and regulations have the doctors. The limit is one pint of alcoholic liquor in ten days. One teaspoonful every a desertspoonful in six, a tablespoonful in three. three hours would exhaust the pint in twelve days. Some authors advise the administration of an ounce every two or three hours to meet certain indications. Such dosage would exhaust the supply in half a day.

Yet no matter how desperate the case the doctor is hobbled by the regulation that one pint must last ten days.

On April 3rd Federal Prohibition Director Howell limited the number of whiskey prescriptions written by one doctor to four hundred per year, the amount to thirty gallons, and prohibited any druggist from handling more than 400 gallons in a year. While these amounts may be suitable for the ordinary physician, there are numerous doctors in charge of railways, factories or mines, to whom such an order is a severe handicap.

The law may be equally burdensome in a different way. It frequently happens that a physician encounters more than one case of the same character in a family. Instances have occurred in which half a dozen members of a household were so similarly affected that the same purgatives, alteratives, anodynes and other remedies, were used for all with the necessary variation in the dose required by the age of the patient. Such a procedure is impossible when an alcoholic liquor is used as a remedy, because the law declares against giving one patient a dose out of another patient's bottle, and with recovery of the patient the remaining remedy

must be destroyed. It must not be given to a second patient, but a fresh bottle secured.—*Texas State Medical Journal*, 11, 1920.

DRUG ADDICTION AND ITS RELATION TO PUBLIC HEALTH*

By Dr. M. W. Swords, New Orleans

I will not undertake a discussion of this subject as the time allotted me is not sufficient to give it the consideration that it deserves. Instead, will merely call to the attention of this Society the importance of this matter, in order that they may discuss it.

Drug addiction is a burning issue all over the civilized world and when an opinion is expressed thereon, it should be after careful study and deliberation. Many are the thousands whose happiness and liberation from slavery depend upon the future acts of the medical profession. Continuous use of opium, or its derivatives, for a sufficient length of time, (necessarily varying in different individuals), produces what is called the opium habit. Cocaine does not produce the same effect as opium or its derivatives. The use of cocaine is a vicious practice and must not be confounded with opium addiction. The so-called morphine habit, in my opinion, is not a habit at all, but a diseased condition definite as to symptomatology, physiology and pathology.

Medical opinion is about equally divided on the subject of drug addiction into two classes. One that addiction is a vice, pure and simple, and that the victims are vicious individuals. The other, that addiction when once thoroughly established is a disease, no matter how contracted—preferred or accidental.

I believe with those that contend that the continuous use of opium or its derivatives produces a diseased condition in the user with manifestations of symptoms that is always true in kind and character in every individual user, regardless of condition, race, sex, age, occupation, custom or habit.

Withdrawal symptoms of morphinism is as distinct in characteristics as any disease that we know. Experimentation by Volante and others has demonstrated that animals when treated by continuous doses of morphine develop the identical phenomena as those found in the individual user of the drug. Volante was able to immunize dogs and other animals from toxic doses of morphine by injecting the serum of an addicted animal into the blood stream of a non-addicted animal. If the truth of this experiment is to be accepted, it absolutely lays at rest the importance placed upon the psychology of drug addiction.

The belief of the penological experts that addicts are mostly criminals, and that opium users are chiefly of this class, to my mind, is only the expression of an opinion that has no justification

*Read before the Louisiana State Medical Society, meeting April 19 to 21, 1921.

scientifically, and is not based on common reasoning. Addiction disease bears the same relation to public health as other diseases that are considered in their particular class. The treatment accorded the addict at present is inhumane, and the medical profession should take immediate steps to put an end to the fallacious opinions existing, as regards the drug addict's station in life.

Legal regulation of the addict that prevents his obtaining a drug that has become a physiological necessity except through illegitimate channels and from irresponsible sources causing untold misery, suffering and death, and is extended through these sufferers to thousands of innocent people dependent upon them for their daily succor, should be either repealed or modified in order that this deplorable condition would no longer be tolerated under the law.

Treatment, care and the final solution of this problem is a scientific one and should be far removed from legal regulation and penological methods; especially when the so-called penological expert and policeman are substituted for the physician; where prisons and the like institutions are made use of instead of institutions of science.

Drug addicts are not criminals and should not be classed as such. There are criminals that are addicts; so are there ministers, lawyers, doctors, and bankers. Therefore, addiction recognizes no social law.

This is a matter that we medical men must solve. It is time for the drug addict to be recognized as a sick individual; it is time for the doctor of medicine to recognize him as a sick individual; it is time for the doctor of medicine to treat this sick individual by the same scientific methods employed in the treatment of other diseases. This is a condition that must be disposed of, and when it is, it will so be by medical men of the universe and not by penological experts and legal regulations.

DISCUSSION

DR. W. H. SEEMANN, New Orleans: I did not intend to discuss this paper, but inasmuch as it has been prepared so thoroughly by a man who has had so much experience in the treatment of drug addiction, it should not go without discussion.

I represented the Louisiana State Medical Society on a committee to study drug addiction. We gave a great deal of time and thought to the subject, but we did not arrive at exactly the same conclusions that Dr. Swords has arrived at, although our experience, our intimate contact with these individuals did not compare in any way to the vast experience Dr. Swords has had.

The general opinion among the men on the committee, many of whom had have considerable experience, was that in the majority of instances the drug addicts were vicious. They admitted that there were some few, or a small minority, but through force of circumstances, through disease,

or for some other reason they had become addicted to the use of morphine or of opium, or one of the other derivatives of opium, and they had become so accustomed to it they were actually in a diseased condition. When I say we differ with Dr. Swords, we differ from him only in some particulars, not entirely. I personally feel, after studying this condition, that I am less able now to express a positive opinion than I was early in my investigations. It seems to me, the further you go into the subject the more ramification you encounter and you find yourself in a sea of doubt, unable to express an opinion or to know in which direction to go. It is unfortunate that something could not have been done by the Federal Government when they enacted the narcotic law to take care of these addicts thrown upon the community. This matter is of considerable sociologic importance, and from the standpoint of criminology it offers probably one of the most vexed questions to solve that the penologists have to deal with. I am sure we all know the enthusiasm with which Dr. Swords has gone into this work, and we feel his views are based on an honest opinion after a considerable experience, and no matter what our decision is, we must all recognize the fact that he has thrown every force of his enthusiasm and vigor in the attempt to solve what has been and what will always be a very vexed problem.

Dr. E. M. Connely, New Orleans: I would like to ask Dr. Swords if in his experience he has run into the criminal class, and that most of them come from the demi-monde, and if they are not, most of them, more or less subnormal intellectually. In other words, do they not come mostly from a class that the psychiatrists call constitutional psychopaths.

Dr. W. J. OTIS, New Orleans: My experience with this class of patients is that the sooner we get them, the more isolation we give them, the quicker the withdrawal of the drug, and the more forced feeding, the better the results. In order to contribute to the recovery of these people, we must have isolation, and to do that we must have co-operation of the state and city officials. To do it thoroughly and properly we must have a psychopathic pavilion with experts in charge. Some of these people we know are quite intellectual under the stimulus of the drug, while others are not. The majority of cases I have to contend with have been subnormal to a large extent, pathologically so. Even though they were keen and acute along certain lines, their intelligence level was below par in a large number of cases. The majority of these cases, as we all know, are anti-social. A number of them are moral imbeciles, psychopaths, and inadequate personalities.

From my experience with these people in all walks of life, male and female, they are just as I have said in opening my discussion. The measures to be invoked for their treatment are isolation,

proper scientific treatment, forced feeding. All with the hope of a recovery.

DR. W. M. SWORDS, New Orleans (closing): Dr. Seemann made the statement that all members of the committee that was appointed do not agree thoroughly with all my views, and that is something that is common to the whole country at present. Doctors are arrayed against one another. They are about equally divided as expressed in my paper. We do not know where we are, but we do know that we are dealing with a matter that is of the utmost practical importance. In these United States there are two millions to four millions of these people that have no place to go, no place to be treated, no place to be comforted except in jail, and they do not want them there.

My fight for the addict has never been based on anything that is curative. I have had no experience with the cure of addicts. I have never treated an addict in my life, but I do believe that if you have these people to contend with, no matter whether they are psychopaths, whether they are below par or above normal, it makes no difference what their mental attitude or physical condition may be, they are still Christian human souls, and many thousands of them are not responsible for their condition. This is one of the instances where you should be your brother's keeper, no matter what condition in life a man or woman may be, whether from the demi-monde walks of life or not. Whenever a man or woman reaches a position in life that he falls by the wayside and continues to fall until he reaches the bottomless pits of hell, naturally we should strive to keep him from being pushed farther down in the mire of perdition, and it is in these cases that we should be our brother's keepers and extend a helping hand to the individual and try at least to give him some comfort and some relief other than serving thirty days in jail under very bad conditions. I do believe it is better to make social assets and possibly honest citizens out of individuals that are compelled to resort to theft and other crimes to obtain the drug that they will and must have. If you do not supply them with this drug legitimately, they will obtain it illegitimately.

I agree with any one that will do anything to help these individuals. Why are they addicts? The United States Government in its congressional record in the statistics tabulated from all parts of the United States gives two great causes of addiction, the environment of the tenderloin districts and association, and doctors of medicine. The government report says that. That being the case, if this is a vice, why should the government spend so much money to treat venereal diseases, which is a vice pure and simple, and yet close every avenue to these suffering unfortunates of humanity from obtaining something they must have and will get. That is the interest I have in drug addiction. I agree with anybody to do anything in the world

for the addict and his family that will better his condition, but I agree with no one who says we should throw these irresponsible individuals out to prey on the public, or to be taken by a policeman and made a prisoner. The jail is no place for such a person. We should treat such a man as we should treat any other individual who is sick, it makes no difference what his station in life may be. That is my interest in drug addiction. It is more from a sociological than a medical point of view. As I have said, I have never treated one of these addicts and never expect to. Gentlemen, let us not throw the addict back into the scums of the city. Let us provide something for him so that he can be isolated and properly cared for. Let us do it quick. They have closed every avenue to these unfortunate beings and have done absolutely nothing for their welfare.

New Orleans Medical & Surgical Journal, Oct., 1921.

THE MEDICAL PROFESSION LOST EIGHT MILLION DOLLARS.

Last year, the 46 hospitals in New York, not maintained by the city, report that they provided 600,000 persons with free treatment for a total of 1,203,728 treatments, for which neither the beneficiary nor the city paid a cent. Many other cities report similar conditions. If statistics were available from the clinics and hospitals of the entire country they would show that, despite universal employment at the highest wages the world has ever known in the history of man, from 3,000,000 to 5,000,000 inhabitants of this Utopian nation last year beat the doctor out of his bread and butter by seeking and receiving free medical and surgical treatment at these dispensaries of medical and surgical charity. Figuring an average of two treatments to a case at only \$1 a treatment, the medical profession has lost \$5,000,000 to \$8,000,000 in fees through this indiscriminating medical charity.—*Medical Pocket Quarterly*.

PRESCRIPTIONS MUST BE IN ENGLISH AND IN TRIPLICATE

The Drugless Physicians' Association is sponsoring two bills which will be proposed at a special session of the Oregon Legislature to be held soon. One of these bills would limit the charge for an operation by any doctor to \$50, and the other would require all prescriptions to be written in English. An unsuccessful effort was made at the last legislative session to pass a bill providing that all prescriptions be written in English and made in triplicate with an exact diagnosis of the ailment and with a statement as to the particular use of each drug prescribed.

THE RAVAGES OF CANCER

The increase of cancer throughout the United States during the past few years has been truly alarming. Here are some startling figures furnished by reliable authority:

In 1920 cancer caused the death of over 100,000

sufferers in the United States alone, and in England, Holland and Switzerland, the death rate was even greater. Unless immediate and drastic preventive measures are taken, cancer will in the future kill more than 5,000,000 people, or five per cent of the population of the United States. One woman in every six and one man in every eight is the present-day ratio of deaths caused by cancer. These statements are substantiated by official statistics and stand as indisputable evidence that the people must be aroused to action in an organized effort to control the situation.

Public Health

BIRTH REGISTRATION DRIVE PLANNED

In view of the fact that Illinois now stands alone among northern states east of the Mississippi that have not qualified for the United States Birth Registration Area, the State Department of Public Health is planning to carry out a determined drive for securing complete birth reports. To this end Director Rawlings recently held a conference with the state registrar of vital statistics and an official from the Federal Bureau of the Census to outline a campaign.

From information reviewed at this conference it appears that twenty-nine counties out of the 102 in the state are now largely responsible for the delayed and incomplete reports that keep Illinois ineligible for the Area. The best of these twenty-nine counties are twenty per cent deficient in their birth reports, while the worst are thirty-three per cent deficient. The names of the counties, together with the percentage of deficiency in each are as follows:

	Per Cent		Per Cent
Adams	20	Kankakee	24
Henderson	20	Stark	24
Knox	20	Bond	24
Marshall	20	Pike	24
Kane	21	Grundy	28
Kendall	21	Hancock	27
Stephenson	21	Boone	29
Morgan	21	Lee	29
Edwards	21	McHenry	29
Logan	21	Lake	30
Crawford	22	Wayne	30
Jo Davies	22	Monroe	30
Alexander	23	Pulaski	32
Will	22	Hamilton	33
Ogle	24		

ANTITOXIN IN GREAT DEMAND

The wide-spread prevalence of diphtheria in Illinois has resulted in unprecedented demands on the State Department of Public Health for antitoxin and for diagnostic laboratory service. Requests for

antitoxin have more than trebled during the last two months, while an unusually large number of diphtheria cultures have been received for laboratory examination. In this connection it is worthy to note that very few requests for toxin-antitoxin have been received, although the Department is prepared to furnish it to physicians without cost.

RESEARCH WORK IN POLIOMYELITIS

In view of the continued prevalence of epidemic poliomyelitis in Illinois, the State Department of Public Health and the Department of Animal Pathology and Hygiene of the State University, are co-operating in efforts to determine, if possible, whether or not a relation exists between cases of poliomyelitis among humans and of paralysis among farm animals. The study grew out of the fact that frequently cases of both are found on the same premises. In carrying out the investigation the Department of Health furnishes the University with information relative to the location of poliomyelitis cases while the University collects specimens of excretions and secretions for bacteriological and microscopic study.

Book Reviews

THE MEDICAL CLINICS OF NORTH AMERICA. July, 1921. Volume 5—No. 1—Chicago Number. Published Bi-Monthly. Philadelphia and London. W. B. Saunders Company. Price per year, \$12.

This volume gives the clinics of Drs. Elliott, Williamson, Hamill, Portis, Bassoe, Hamburger, Byfield, Tice, Strauss, Gerstley and Wright. This number is up to the usual standard of the Clinic.

THE SURGICAL CLINICS OF NORTH AMERICA. August, 1921. Volume I—No. 4. Chicago Number. Philadelphia and London. W. B. Saunders Company. Price per year, \$12.

This volume lists the clinics of Drs. Andrews, Beck, Bettman, Bevan, Cabot, Christopher, Cornell, Davis, De Lee, Moorehead, Nuzum, Parker and Strauss.

DISEASES OF THE SKIN. By Richard L. Sutton, M. D. With nine hundred and sixty illustrations, and eleven colored plates. Fourth edition revised and enlarged. St. Louis. C. V. Mosby Company. 1921. Price.

Since the former edition was written the literature of this subject has steadily and consistently advanced along many lines. The clinical and serological study of syphilis is thoroughly brought up-to-date in this issue. The researches on epidermophyton infection and its etiological relationship to certain chronic inflammatory disorders of the skin heretofore sadly neglected in this country is exhaustively treated in this issue.

Much new material has been added, as for in-

stance, descriptions of Nocardiosis, Vincent's disease, dermatitis dysmenorrhoea, amebiasis cutis, and neurotic excoriations.

THE PRACTICAL MEDICAL SERIES. Volume II. General Surgery. Edited by Albert J. Ochsner. Chicago. The Year Book Publishers. 1921. Price, \$2.50. This volume is up to the usual standard. While

the subject of surgery is abstracted, yet the work is done so as to bring out in full the data that will prove of benefit to the profession. More material from Continental Europe appears in this volume than in previous ones.

THE PRACTICAL MEDICAL SERIES. Volume III. Eye, Ear, Nose and Throat. Edited by Casey Wood, Albert H. Andrews and George E. Shambaugh. 1921. Chicago. The Year Book Publishers. Price, \$1.75.

Much valuable material appears in this volume. The compilation of the valuable military experiences of Ophthalmologists appears in this volume together with essays on ophthalmic relations of lethargic encephalitis, focal infections and a number of other systemic conditions. There is much in this volume that will interest the general practitioner.

WARFARE IN THE HUMAN BODY. By Morley Roberts. With an introduction by Professor Arthur Keith, M.D. New York: E. P. Dutton Company. Price, \$7.00.

This work elucidates the phenomena of biology in its applications to social questions and illustrates admirably the way a novice can bring a clarifying stimulus into more scientific circles. The work should help clarify many problems which medical men are attempting to solve.

MODERN ITALIAN SURGERY. By Paolo De Vecchi, M. D. With 15 full-page illustrations. New York. Paul B. Hoeber. 1921. Price, \$5.00

This work treats of medical accomplishments in Italy. Heretofore Americans have gone to Germany, France, England and Austria. They are now directed to Italy, because of great achievements of this country in medicine and surgery in the last war; for instance, the surgery of the chest. This work exploits the achievements of Edoardo Bassini of Padua and his original operation for the cure of inguinal hernia; Francesco Rizzoli and Alessandro Codivilla for their work on Orthopedics; Enrico Bottini for his contribution to the surgery of the prostate gland; Edoardo Porro for his special uterine operation; Antonia Carle and G. F. Novaro for their contribution to the surgery of the intestines; Francesco Durante for his iodine treatment of bone tuberculosis; Raffaele Bastianelli for his extensive contribution to the surgery of the thorax and abdomen; Davide Giordano for his study of the surgery of the kidneys; G. Vanghetti who devised

experimentally kineplastic flaps for amputation, and Antonia Ceci who, applying these principles to the human subject, attained a much more satisfactory prosthesis than ever before achieved.

EVOLUTION, GENETICS AND EUGENICS. By Horatio Hackett Newman. Chicago, Illinois. University of Chicago Press. 1921. Price, \$3.75 net. Post-paid, \$3.95.

This book is intended to meet a long felt demand for a condensed account of the various phases of evolutionary biology. While it is intended primarily for a college text-book, it has been sufficiently broadened to meet the requirements of the general reader. The author also attempts to show that evolution and religion are not diametrically opposed, as is the present-day belief in many quarters. Indeed, he makes it quite clear that evolution and religion are strictly compatible.

Part One treats of the history of the development of evolutionary science. Part Two is a presentation of the evidences of organic evolution. Part Three deals with the causo-mechanical theories of evolution with Darwinism as the central topic. Part Four deals with genetics or experimental evolution. Part Five, with genetics as applied to human development.

Society Proceedings

ADAMS COUNTY

September Meeting

Meeting held at Chamber of Commerce, Monday, September 12, 1921. Call to order by President Doctor W. E. Mercer, about 8:40 p. m. Minutes of last meeting and annual outing read and approved.

Communications read by the secretary:

1. From Anna State Hospital asking for name and address of physician who would consider an appointment to a position as junior assistant physician.

The secretary requested more information regarding this position and received the following: Position now open. Physician appointed must devote entire time to service at the hospital. Minimum salary including full maintenance \$125 and a maximum salary of \$150; applicant must be duly licensed and in good standing. (No action taken.)

2. From local Chamber of Commerce regarding proposed trip to St. Louis. (No action.)

3. Letter from District Councillor, Dr. H. P. Beirne, giving program, place and date of sixth district councillor district meeting. (No action.)

4. Request from Mr. R. R. Swainie, who has conducted the Swainie Baths in our city for a number of years, for a letter of recommendation to the organized profession of Peoria, before establishing a branch office in that city for the administration of hydrotherapeutics and massage.

5. Communication from the American Society for the Control of Cancer. (No action.)

Motion by Dr. Koch that society grant Mr. Swayne's request. Seconded. Carried.

Newspaper clipping of interest to the members, relative to telephone service, as regulated by the Physicians-Surgeons Exchange of Peoria, read by Dr. Koch, who had taken the trouble to write and obtain further information, which he also read. Since the process is only being initiated in Peoria, the details of its workings were necessarily meagre. Accordingly a motion was made, seconded and carried that Dr. Koch be empowered to send more communications and report results to the society.

Fees allowed by casualty companies brought up and discussed.

Motion. That secretary write to Department of Registration and Education, requesting the services of an investigator in Quincy to secure details in case of abortion and death which occurred recently. Seconded. Carried.

Bills for month allowed and vouchers ordered.

Scientific program: "Basal Metabolism," Dr. Harold Swanberg, Quincy. "Diphtheria," Dr. Isaac D. Rawlings, Springfield, Director of State Department of Public Health.

Doctor Swanberg gave a very complete description of basal metabolism. Explanatory charts and illustrative slides served to make his excellent talk more emphatic and more comprehensible.

Following this intellectual treat, Doctor Rawlings read a practical and descriptive paper on diphtheria. He referred to the uses of toxin—antitoxin, the dosage and technique of the same, to the Schick test and lastly to antitoxin. Another point emphasized by the doctor was how we as physicians can assist in the control of the disease. One way—refuse to permit milk bottles to be returned.

A rather lengthy discussion followed in which most of those present took part.

Before adjourning, Doctor Stevenson moved that the speakers be given a rising vote of thanks as one means of expressing our appreciation and gratitude. Seconded and carried unanimously.

We certainly were delighted to have Dr. Rawlings with us and trust he will visit us again in the near future.

The meeting was very well attended and we hope the good work will continue.

October Meeting

Meeting held on Monday, October 10, 1921, at the Chamber of Commerce. Call to order by President Mercer at 8:25 p. m.

Attendance very good. Minutes of last meeting read and approved.

Communication from Dr. C. E. Rosenow, of the Mayo Foundation, regretting that an overwhelming amount of work in connection with the epidemic of poliomyelitis would prevent him from being present at our next meeting.

Letter from our State President in acknowledgement of an invitation to visit the society which had been extended to him by the secretary. Doctor Humiston

believes in having the ladies present and for that reason suggested either a public meeting or a dinner with the physicians' wives present. Accordingly, the secretary (being a woman) made a motion that the ladies be invited to the annual banquet in January and that Dr. Humiston be the speaker on this occasion. The same was seconded and carried.

Since nothing had been heard from the Department of Registration and Education relative to the matter brought up at the last meeting, a motion was made, seconded and duly carried that the secretary write again and demand that an investigator be sent to Quincy to clear up matter under consideration. Further, that this communication be signed by the president also.

Bills allowed and vouchers ordered.

Secretary asked the cooperation of the society in the establishment and development of a clinic (proposed) to be under the direction of the Jacksonville State Hospital. By a motion which prevailed this cooperation was willingly given.

Dr. Roswell T. Pettit, well known throughout the State, then addressed the members on Pulmonary Tuberculosis.

We have had some good speakers this year and some fine scientific work has been presented, but Dr. Pettit was given the credit for the best paper of the year, so that statement expresses how well his splendid talk was received.

Adjourned.

ELIZABETH B. BALL,
Secretary.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, October 12, 1921

1. The Schick Test and Toxin Antitoxin Immunization in Diphtheria.....C. A. Earle
Discussion: George Weaver and Hugh Jones
2. Endocarditis: LentaE. Lackner
Discussion
3. Clinical and Experimental Studies on the Cerebro-Spinal Fluid Tension in Acute Injuries of the Brain.....
.....Harry Jackson and Prof. Frank C. Becht
Discussion: A. B. Kanavel

Regular Meeting, October 19, 1921

1. Clinical and Experimental Studies on the Cerebro-Spinal Fluid Tension in Acute Injuries of the Brain.....
....Harry Jackson and Prof. Frank C. Becht
Discussion: A. B. Kanavel
2. Safety-First in Anesthesia.....
.....F. H. McMechan, Avon Lake, O.
Discussion: Arthur Dean Bevan

Regular Meeting, October 26, 1921

1. The Anterior Branch of Middle Meningeal Artery: Its Anatomical Tunnel and Surgical Importance. Lantern Slides.....
.....Joseph E. Rowan
Discussion: C. C. Rogers, H. E. Santee

2. New Methods of Cesarean Section. Lantern Slide Demonstration.....Joseph B. DeLee
Discussion: D. S. Hillis and W. C. Danforth
3. Recent Advance in the Diagnosis and the Management of Pericarditis with Effusion.....
.....Charles Spencer Williamson

DE KALB COUNTY

Oct. 27, 1921, the De Kalb County Medical Society, at the invitation of the Board of Directors, met at the Tubercular Sanitarium on Sycamore Road. Twenty-four physicians were present.

A resolution was adopted endorsing the movement for "reduction of armament by international agreement."

Moved and seconded that the secretary be instructed to draw up a letter endorsing Dr. John E. Tuite of Rockford to succeed the late Dr. Crawford as councilor of the first district of the Illinois State Medical Society. Motion was carried.

The following officers were unanimously elected for 1922: President, Dr. Louise L. Culver, Sandwich; vice-president, Dr. Jas. A. Oliver, Hinckley; secretary-treasurer, Dr. Clifford E. Smith, De Kalb; censor for three years, Dr. Carl H. Wilkinson, Waterman; delegate to State Society, Dr. John W. Ovit, Sycamore; alternate delegate, Dr. Chas. B. Brown, Sycamore.

Dr. I. E. Barton told of the cure of several cases of anginous scarletina by the use of diphtheria antitoxin.

Dr. John P. Kane reported that at Cook County hospital twenty per cent of all scarletina cases showed positive Klebs-Loeffler bacilli. Dr. Kane also warned us to be on the lookout just now for nasal diphtheria. "Look out for the bloody noses."

Dr. A. M. Hill reported a case of gastropotosis relieved by an abdominal supporter.

Dr. Richard B. Oleson of the Smithies Clinic in Chicago gave us a fine address on the "Non-Surgical Drainage of the Biliary Tract with regard to its Diagnostic and Therapeutic Possibilities."

Our state senator, Dr. H. G. Wright, told us of the fate of the various bills pertaining to medical legislation that were before the legislature during its last session. He advised us to offer and back legislation for our own welfare, i. e., take the initiative, rather than forever sit back on the defensive. Moved and seconded that the De Kalb County Medical Society go on record as supporting Dr. H. G. Wright for re-election to the state senate. Carried.

LEE COUNTY

The regular quarterly meeting of Lee County Medical Society was held at the city hall in Dixon, October 6, with fifty present, including visitors from Sterling, Mendota, Forrester and Ohio. Dr. Charles Louis

Mix, Chicago, read a very instructive paper on "Meningitis," with particular emphasis on early diagnosis and treatment. Discussion brought out the fact that the paper was most modern and practical. A unanimous vote of thanks was given Dr. Mix and motion was passed that the paper be sent to the ILLINOIS MEDICAL JOURNAL for publication.

MADISON COUNTY

Our Meeting at Madison

Friday, October 7, was another red letter day in the history of our society. On that day the society met at Madison and although the weather was very inclement, with a cold, drizzly rain falling all day, we had a good attendance and a program that had but few equals in all of our experience.

Dr. McKim Marriott of St. Louis stood up before his audience and for over an hour poured out a wealth of practical information on artificial feeding of infants that was not only interesting but also highly instructive. It was a practical talk, giving in detail the schedule of feeding, the amount of feeding as to age and also the hours of feeding. His formula was to give boiled cow's milk properly diluted with water, to which was added a small quantity of cane sugar.

The talk was full of good, hard common sense and was highly appreciated by all members present, and elicited quite an animated discussion.

Dr. Richard Weiss of St. Louis was the next speaker, and gave a talk upon the more common forms of skin diseases that we all encounter in our daily work. He described the various forms of skin lesions, gave pointers on the diagnosis and treatment, and in such a clear, descriptive manner that a great deal of information could be gathered in this specialty, which will be of benefit in the office and at the bedside. It was a great day.

AMENDMENT TO BY-LAWS

At our last meeting, Section 2, Chapter 5 of our By-Laws was amended to read as follows:

Sec. 2.—The annual dues shall be \$7.00, and shall be payable on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the society. A member suspended for non-payment of dues shall be restored to full membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members.

MCDONOUGH COUNTY

The regular quarterly meeting of McDonough Medical Society was held at Macomb, Illinois, October 4, 1921. Twenty members and visitors were present. Dr. J. M. Masters, of Mackinaw, Illinois, conducted a Tuberculosis Demonstration Clinic in the library of the Macomb Clinic from 3:30 to 5:30 p. m. Activities were transferred to the Illinois Theatre, where from 5:30 to 6:30 p. m. a two reel popular moving picture

showing ravages of tuberculosis and possibility of its cure was given.

After a recess of thirty minutes the meeting was continued at the Christian Church, where a delightful banquet was served by the ladies of this organization. At the annual election the following officers were elected:

President, Dr. W. E. Carnahan, Adair; vice-president, Dr. George Knappenberger, Macomb; secretary-treasurer, Dr. William W. Hendricks, Macomb; delegate, Dr. E. R. Miner, Macomb; alternate delegate, Dr. J. P. Roark, Bushnell; necrologist, Dr. J. B. Holmes, Macomb; board of censors, reappointed.

After the business meeting, the program was concluded by addresses by Dr. Masters, "The Relation of the Tuberculosis Sanatorium to the General Practitioner," and Dr. Hartman, "Aims and Problems of Sanatorium Board."

SIXTH COUNCILOR DISTRICT

The meeting of the Sixth Councilor District at Rock Spring Country Club, Alton, September 29, was attended by about 150 physicians and was an unusual success, both from the scientific and organization standpoints. The following program was presented:

1. "The Control of Mortality of Abdominal Operations for Cancer," Dr. George W. Crile, Cleveland Clinic, Cleveland, Ohio.

2. "Colon Disturbances," (with lantern slides), Dr. Leon Bloch, Professor of Medicine, Rush College, Chicago, Ill.

3. "Goiter Situation in Europe," Dr. E. P. Sloan, President-elect Illinois State Medical Society, Bloomington, Ill.

4. "Discussion, Thyroid Toxicosis and the Use of Radium," Dr. H. P. Beirne, Beirne Radium Institute, Quincy, Ill.

5. "Disease of the Heart (particularly from the standpoint of radiography and electrocardiography)," Dr. J. L. Tierney (Internist), Engelbach & Tierney, St. Louis, Mo.

6. "Medical Organization," Dr. C. T. Humiston, President Illinois State Medical Society, Chicago, Ill.

Personals

Dr. Samuel W. Lathan, Eldorado, has been appointed chief medical director of the state industrial board.

Dr. Frederick H. Falls, Chicago, has been appointed head of the department of gynecology and obstetrics of the State University of Iowa College of Medicine.

The governor has appointed Dr. Samuel A. Graham, Clinton, as district health superintendent in Health District No. 15, effective, October, 17.

Dr. John W. H. Pollard was recently ap-

pointed full-time health commissioner of Quincy. Dr. Pollard formerly occupied the chair of hygiene and physical education at Washington and Lee University, Lexington, Va.

Dr. A. D. Bevan, past President of the American Medical Association, has had conferred on him the title of Officer of the Legion of Honor for services rendered to medical science and education and as President of the American Medical Association during the war.

Dr. John Kercher announced his return from Europe and resumption of practice at 3034 Michigan Avenue, Chicago, October 9.

Dr. O. W. McMichael held an all day clinic at Joliet, Illinois, on October 12th and was entertained at a luncheon given by the Will County Medical Society at which he gave a talk on "Our Changing Views Regarding the Treatment of Tuberculosis."

Dr. H. Z. Griffin, Rochester, Minn., gave an illustrated lecture "Removal of the Spleen," before the Peoria City Medical Society, October 18.

News Notes

—Tazewell County Medical Society met in the council chamber at Pekin, October 14. Dr. George Parker, Peoria, gave an address on "New Discoveries in the Treatment of Nephritis." The following officers were elected: President, Dr. L. R. Clary, Pekin; vice-president, Dr. H. A. Zinser; secretary-treasurer, C. Fred. Grimmer, Pekin; delegate, Dr. F. C. Gale, Pekin; alternate, Dr. Glasford.

—Plans have been submitted for the addition to the St. Francis Hospital, Litchfield, to be built at a cost of \$50,000.

—Work has been started on the addition to the West Suburban Hospital, Oak Park, at a cost of approximately \$180,000.

—The first meeting for the session 1921-1922 of the Institute of Medicine was held October 21. The Pasteur Lecture was delivered by Dr. Theobald Smith on "Theories of Susceptibility and Resistance in Relation to Methods of Artificial Immunization."

—The Illinois Tuberculosis Association at the annual meeting in Champaign, Oct. 15-18, re-

elected Dr. Gerge Thomas Palmer president for the tenth consecutive term. Other officers were elected as follows: vice-presidents, G. L. Avery, Peoria, Dr. Ross Maxey, Mt. Vernon, Prof. S. A. Forbes, Urbana, and Miss Esther Fairchild, R. N., Princeton; secretary, Miss Madge Nicholson, Watseka; members of executive committee, Dr. James W. Pettit, Ottawa, and Dr. W. E. Rice, Tuscola. Dr. James M. Graham announced that the Knights of Columbus at their annual meeting had decided to support the anti-tuberculosis movement.

—The Radiological Society of North America announces a meeting to be held in Chicago, December 7-9.

—Dr. J. W. Pettit held a clinic at Metropolis, October 28, at the request of the Massac County Tuberculosis Association.

—The Logan County Medical Society met at the Lincoln State School and Colony, October 19, as guests of Dr. C. B. Caldwell. Dr. James C. Gill, Chicago, gave an address on "Nervous Diseases and Infections." Dr. D. B. Phemister, Chicago, spoke on "Infections Involving the Bones." In the afternoon a clinic was held in the Deaconess Hospital.

—Knox, Henry and Warren County Medical Societies held a union meeting in Galesburg, October 20. Dr. Arthur M. Corwin, Chicago, gave an after-dinner address on "A Good Hand to Hold." Dr. Joseph B. DeLee presented "The Newer Indications for the new Cesarean Section and Prevention of Their Abuse." Dr. Dean Lewis spoke on "The Surgical Lessons of the Breast." Dr. Joseph L. Miller chose as his subject: "The Recognition and Treatment of Mild Hyperthyroidism."

Marriages

Weldon Branch Kilton, Harvel, Ill., to Miss Mildred Long of Monticello, Ill., October 5.

Joseph M. Knochel, Lincoln, Ill., to Miss Loretta Springer of Chicago, in September.

Laurence Matthew Marley, Chicago, to Miss Mary Kathryn Conroy of Beloit, Kan., September 1.

William McMicken Hanchett, Chicago, to

Miss Alice Mark of Lake Forest, Ill., September 17.

Roger Pinkerton, Chicago, to Miss Grette Ritchie of Sterling, Kan., August 18.

Deaths

LLOYD MOSS BERGEN, Highland Park, Ill.; Rush Medical College, Chicago, 1889; a Fellow A. M. A.; head of the Highland Park board of health; former surgeon for the Chicago Northwestern Railroad and Northwestern Military Academy; died October 17, aged 56.

A. L. DESOUCHET, Chicago; Chicago Homeopathic Medical College, 1886; died September 21 in Los Angeles, from diabetes, aged 59.

JOHN MILTON GAMBILL, Centralia, Ill.; University of Michigan, Ann Arbor, 1912; a Fellow A. M. A.; specialized in pediatrics; died September 13, from arteriosclerosis, aged 46.

JOHN BULL HENCH, Hinsdale, Ill.; Rush Medical College, Chicago, 1883; a Fellow A. M. A. practitioner for forty years in Hinsdale; for several years instructor in medicine in the medical department of the University of Illinois; member of exemption board during the World War; died September 17, from cerebral hemorrhage, aged 66.

MADISON D. HULL, Bloomington, Ill.; Louisville (Ky.) Medical College, 1876; consulting physician, St. Joseph's Hospital; died September 8 from heart disease, aged 70.

JOHN M. LIPSON, Chicago; American Medical Missionary College, Chicago, 1903; a Fellow A. M. A.; owner of the St. Paul Hospital; was shot and killed by bandits in a drug store, October 15, aged 47.

ROBERT EWING MCKENZIE, Gilman, Ill.; Washington University Medical College, St. Louis, 1899; a Fellow A. M. A.; died September 15 at the Brokaw Hospital, Bloomington, Ill., from chronic nephritis, aged 44.

FRANK WYLIE NASH, Rockford, Ill.; University of the City of New York, 1887; died suddenly, September 27, from heart disease, aged 70.

WILLARD G. PIERSOL, Lee, Ill.; University of Wooster, Medical Department, Cleveland, 1877; died September 16 at the home of his sister, from cerebral hemorrhage, aged 72.

DAVID HOBART RICHARDSON, Barrington, Ill.; Rush Medical College, Chicago, 1882; member of the Illinois State Medical Society; school president and member of the board of trustees since 1895; died suddenly October 16 from heart disease, aged 68.

CARL GEORGE TURNER, Canton, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1896; a Fellow A. M. A.; died September 26 in an ambulance while being conveyed to the county hospital, Denver, from heart disease, when on a motor trip to California, aged 51.

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Original Articles

THE DETERMINATION OF DENTAL FOCAL INFECTIONS BY MEANS OF THE RADIOGRAM

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The incentive for this discourse is to correct a very prevalent and almost universally accepted premise, that the radiogram is incontrovertible, *prima facie* evidence of the absence or presence of dental focal infection.

Epochal periods take place in medicine as well as in other fields of endeavor. It is the sincere conviction of the writer that the appreciation of the potency or the actuality of dental infections as the causative or contributory factors of disease processes, marks a new era of such moment that it is second to no other discovery in the domain of medicine.

Generally speaking, three factors are the chief causes of disease processes; namely, disturbances of metabolism, trauma and infections. These may exist separately or in various combinations and sequences.

Traumatic conditions give very evident etiology, but the cause or causes of metabolic or infectious diseases are not so easily recognized.

In 1683 Leewenhoek announced the discovery of spermatozoids, yeast cells and certain large bacteria. Plenciz of Vienna, was so favorably impressed with Leewenhoek's work that in 1762 he announced the results of his researches, stating that each disease is caused by a special organism, that decomposition is caused by micro-organisms and that bacteria can grow in living tissue.

This, most naturally, was of tremendous importance. Subsequently Oliver Wendell Holmes in the year 1843 published his famous essay on the "Contagiousness of Puerperal Fever." In 1847 Semmelweiss maintained the same theory.

The first definite knowledge of bacteria and their products came from a chemist and not a physician, and dates from the study of fermentation by the illustrious Frenchman, Pasteur.

Before his day, bacteria were known, theories of infections had been elaborated and vaccination practiced, but he definitely established the importance of bacteria in putrefaction, fermentation and disease, and gave to vaccination a scientific basis.

The views of Pasteur, which were radical departures from accepted beliefs, inaugurated a bitter controversy, and in that controversy were born the microbic theory of disease, the doctrine of preventive inoculation, antiseptic surgery and serum therapy.

Since then, considerable knowledge has been added to bacteriology, serology and immunology.

Asepsis and antisepsis, for which Lister deserves great commendation, were developed on the predication of infection.

It appears then, that prophylactic medicine was to be and now is, the most auspicious procedure for the preservation of human life and abolition of much illness and discomfort. This formula naturally requires donors and recipients, the latter representing the patients, the former the physicians and dentists.

Great difficulty is encountered in persuading the acceptance of ideas that appear radical and re-education, which is sometimes slow and tedious, is not productive of the results consistent with the exigencies of the ever present end results of invalidism or death.

Medicine is so manifestly empirical, that in the attainment of a diagnosis, conservatism, a postulation so often used to cover up ignorance and procrastination, is advised and practiced, often terminating seriously.

There are three factors that have a direct bearing on any infective process; first, high virulence of the infecting organism; second, degree of resistance of the individual, viz., immunity; third, inoculation with an unusually large number of

bacteria which if introduced in large numbers overwhelm the protective elements of the body.

To anticipate eventualities or to practice conservatism, the afore mentioned factors should be known; however, there is no method, now known, which can be applied to predetermine these factors before extracting the tooth or teeth that might be producing infection.

Unfortunately it often happens that little or no pain exists in the neighborhood of the pathologic teeth, and because of this a sense of false security is entertained by the physician, dentist and patient; how fallacious this is, one can readily understand by calling to mind, such diseases as leukemia, pernicious anemia, sarcomata, tuberculosis, etc., where pain is practically absent and still the termination is fatal.

One often hears the argument advanced that the patient does not get well or improve after extraction; the solution of this can be found by considering the possibility of metastasis, or metabolic disturbances, because of toxin absorption or presence of other sources of infection than dental or a combination of these conditions.

The metastatic action of malignancies is always considered rather gravely, and something to be completely avoided, while metastatic involvement of infectious origin is too often disregarded, with the consequences that convalescence may be retarded, prolonged or wholly unsatisfactory. Furthermore resolution from a disease process depends to a great extent on the nature of the organism and the duration of the illness. It therefore appears reasonable that the earlier a focus of infection is removed the more rapid the convalescence.

The works of Billings, Rosenow, Duke, Head, Roose, Diveley, Novitsky, Brown and Irons, have definitely established the presence of infection in teeth; their deductions were based on bacteriological, pathological, roentgenological and clinical observations.

Rosenow's work was done in conformity with Koch's law and was ultra scientific; however, it is unfortunate that much of the practice of medicine is empirical and the end result is the deciding factor in judging values.

Consequently, the writer was impressed by clinical experiences, of the necessity of assisting in disproving some accepted notions based on the findings of the radiogram.

The radiogram records variations in densities; these apparent variations should describe bony and dental structures, some of the latter, viz., the peridental space, by indirect signs only.

Considering the behavior of bone in general, as observed roentgenologically, it appears to be a structure of very limited reaction to pathologic conditions. From this viewpoint, there seem to be only three reactions possible. First, atrophy or diminution of lime content; second, destruction of bone tissue, local or general; third, formative processes, characterized by formation of new bone or a condensation of existing bone around a focus of disease.

At the present time it is quite generally agreed that if a destructive area is observed around a tooth, that tooth should be extracted.

However, we have still under dispute, first, those teeth in which a periapical decalcification exists, regardless how minute; second, those areas containing formative bone.

The areas of decalcification have, in the writer's experience, been more prolific sources of disseminating disease than those infective processes attended by osteopathic formation. The osteoplastic formation is the effort of the local bone structure towards localizing the disease, indicating a good immunizing tendency, and probably suggesting a low virulence of the infecting organism, and also an infection of long standing.

In periapical rarefactions the following impressions are perceived; first, relatively acute process; second, possibly a virulent organism, in large numbers; third, poor local resistance. In either case, extraction is advised.

A more contentious matter is, what shall be done with teeth that are well filled and have no roentgenological evidences of pathology? By all means, if the patient is sick and no other possible source of infection can be found, extract the tooth. This comes under the incongruous head of conservatism. Conservatism, because if we do otherwise, we are open to censure; but, the censure should be placed where it rightfully belongs, that is, on the patients.

Why should they approach the dental profession with foci of infection and expect the resurrection of dead structures? As medical men we do not attempt to replace diseased organs by new ones, neither do we permit a pus appendix

to remain. Why should the supernatural be expected from the dentist?

The lay people must be educated to visit the dentist early and often to prevent organic decay and it is then that the full value of prophylaxis will exist. Heretofore, the dental and medical professions have borne the responsibilities that the patients should have borne and by common accord the patients should be made to feel that the responsibility is wholly theirs.

In some cases the radiogram may reveal a change in the normal appearance of the periodontal space; this may be accompanied by a localized decalcifying or osteoplastic process and need not necessarily be apical. In such cases extraction is again advised. In the acute or fulminating types of infection, the x-ray is quite valueless, unless some antecedent process such as alveolar absorption in the immediate vicinity, is evident, from which reasonable deductions might be made.

With reference to alveolar absorption, a survey should be made as to the depth of absorption, number of tooth areas involved, acuteness and activity. If a single area is involved, the amount of absorption small and the progress slow, treatment might be tried; however, continued observation is necessary and if the process is progressive, extraction is advisable, to prevent if possible, an extension by continuity of structure.

Of the two processes the closed infective process is generally to be considered more harmful than alveolar absorption.

CONCLUSIONS

First; the future of medicine and dentistry lies essentially in prophylaxis.

Second; the burden of early treatment should rest on the patient.

Third; cooperation of dental and medical professions in re-educating the lay people.

Fourth; (a) It is inadvisable to devitalize teeth and when that stage is reached, extraction should be advised, although it must be admitted that devitalized teeth are carried by patients, which teeth are not symptom producing.

(b) However, these teeth are potentially bad and infection may occur at any time, without any local symptoms becoming manifest.

Fifth; if the radiogram gives evidence of disease, it is of value, in a positive sense, however, if no evidences of disease are present, a definite

exclusion of pathology cannot be made, since considerable time elapses between the onset of infection and x-ray manifestations of disease.

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A PLEA FOR PHOTOTHERAPY IN SURGICAL TUBERCULOSIS

EINAR HOFF, M. D.,
SEATTLE, WASH.

The value of sunlight has, in a general way, been recognized almost from time immemorial. Herodotus, Hippocrates and Celsus speak of the beneficial effects of the sun's rays, and in ancient Rome and Athens the rich people had solaria on their houses.

A. Rollier of Leysin, Switzerland, and N. Finsen of Copenhagen, Denmark, were the pioneers in heliotherapy and phototherapy and, due to their efforts and tireless work, many scientific facts were brought before the medical profession. Rollier in December, 1914, reported to the Swiss Surgical Association his results in heliotherapy. Over 2,000 cases of tuberculosis of bones and joints had been successfully treated by Rollier in one decade.

Finsen, Copenhagen, by his great work in phototherapy, established it as a clinical method in the treatment of lupus vulgaris and surgical tuberculosis and the Finsen Institute in Copenhagen is now the mecca for thousands of sufferers from those diseases.

Light is a wave-like disturbance which passes out in all directions from a luminous object through an ethereal medium. Light waves are not all of the same wave length and the difference in length makes itself known to our eyes as colors. When the sun's rays pass through a prism they are dispersed into several kinds of light, and this we call the visible spectrum in which it is

customary to distinguish seven colors, the red rays being the longest, the violet the shortest.

Finsen began with the successful treatment of lupus vulgaris and lupus erythematosus, employing the sun's rays; but he soon adopted the electric arc light which produces radiation of practically the same character as the rays of the sun and richer in ultra-violet frequency of the spectrum.

The light rays have three properties:

1. Light production—most intense in yellow.
2. Heat production—red rays.
3. Actinic action—ultra-violet rays.

Physiological action of light:

1. Increases metabolism.
2. Increases hemoglobin.
3. Pigmentation.
4. Decreases blood pressure.
5. Stimulates nervous system.
6. Hyperemia of skin.

Law: "The intensity of the light diminishes as to the square of the distance." For instance; if the patient be one meter from the light he receives one-fourth the light he would receive if he were one-half meter from it.

Coal Arc Light—All kinds of rays—requires strong current, 20-75 amperes; 15-20 amperes sufficient to treatment of one patient.

Mercury Quartz Light—Short waved—less penetrating. May be used in homes.

At the Finsen Light Institute they speak of a strong and a weak light bath. The patients undress and to protect their eyes they wear colored spectacles during the bath.

Strong Light Bath— $\frac{3}{4}$ hour to 1 hour (wait 24 hours) then gradually from 1 to $2\frac{1}{2}$ hours. Erythema—peeling of the skin—ceases in four-teen days.

Weak Light Bath— $\frac{1}{4}$ to $\frac{1}{2}$ hour—in 8 to 14 days to $2\frac{1}{2}$ hours. The skin becomes dark red from dilated capillaries.

Patients of light complexion do not tolerate the bath so well and in some cases severe systemic reaction follow the bath. Fever, chills, tachycardia have been noticed. In these cases it becomes necessary to interrupt the bath and give luke warm shower baths in between. Every light bath is followed by a shower bath and rubbing of the skin.

Erythema: The arc light causes a dilatation of both superficial and deep capillaries and if the exposure is too powerful a severe inflammation may be the result. The ordinary exposure gives an irritation of the skin like a mild inflammation that diminishes in 48 hours, leaving a chronic erythema and a pigmentation.

Continued exposure with short intervals will show the same phenomena on the skin, but lastly, the skin will be so pigmented that there will be no other changes to observe. The pigmentation is no doubt a protective process on the part of the body against the ultra-violet rays.

The erythemas from the mercury quartz lamps are painful. Why that is so is not known, but macroscopically there is a great difference between the erythemas produced by the coal arc and the mercury quartz light. The former is dark red caused by a dilatation of both superficial and deep capillaries; the latter is more of a blue-red or slate-like color. It seems as if the mercury light causes more like a stasis from a superficial penetration of the light. The coal arc light is used almost exclusively by the Finsen Institute because the results of the mercury quartz lamps have been slow, very capricious and unreliable.

Concerning the question of immobilization in surgical tuberculosis, the Finsen Institute has adopted Rollier's plan to immobilize only in cases of pain or in order to prevent an unfavorable anatomical position, and even in those cases the detachable splints have been taken off during the light bath.

In tuberculosis of the large joints of the lower extremities it is important to have the patients do as little walking and stepping as possible.

Periarticular abscesses are frequently met with and in the process of treatment they are often formed. Simple puncture is preferred and later if that does not suffice the abscess is laid open without tampon and a prolonged light bath is instituted. It is astonishing to see how fast those incisions close and the articulations improve.

In the treatment of fistulas running directly into an articulation I wish to call attention to the increased hyperemia, serous exudate and edema of the tissues that is apt to close a narrow fistula. Neglect in those cases means retention in the joint, subsequent pyarthrosis and sepsis.

Phototherapy has been successfully used in:

Tuberculous joints, tuberculous peritonitis,

adenitis, osteitis, spondylitis, sternum, costal, tenosynovitis.

The following facts have been put forth and demonstrated by N. P. Ernst, Surgeon in Chief, Finsen Light Institute:

1. Phototherapy is equal to or superior to heliotherapy.

2. Phototherapy will cure surgical tuberculosis and lupus vulgaris.

3. Coal arc is superior to the mercury quartz light.

The Finsen light treatment for lupus vulgaris consists in exposing the lupoid area to concentrated coal arc light, which is focused on the skin through an inverted telescope, and finally passes through a rock crystal chamber full of cold running water, so as to eliminate the red rays.

It is important that the water chamber should be pressed firmly against the skin in order to devascularize it during the seance. The sittings last about an hour and an attendant controls the crystal water chamber, keeping it firmly against the skin, and shifting it from time to time.

An inflammatory reaction follows, a local leucocytosis supervenes, a soft scar is produced and the disease may entirely disappear.

Results of treatment of lupus vulgaris:

Four-year-old cases—59.8 per cent. cured.

New cases—72 per cent. cured.

Heliotherapy and phototherapy by the investigation of Finsen, Rollier and others has vindicated their value as a great therapeutic measure in lupus vulgaris and surgical tuberculosis and radical surgical interference should be resorted to only after a long trial of light therapy.

In America, where electricity is so cheap, every well run county and city hospital should have a department of phototherapy for the treatment of surgical tuberculosis and I venture to say that the time is not far off when it will be so. Phototherapy has come to stay and out of it will grow more knowledge of some of our obscure diseases of metabolism and internal secretion, anemias and perhaps forms of insanity.

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SEVERAL IMPORTANT POINTS IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

ROSWELL T. PETTIT, M. D.,

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Physician-in-Charge Illinois Valley Diagnostic Hospital

OTTAWA, ILL.

Tuberculosis is the most prevalent disease that afflicts the human race and without question the most serious. It kills more people than any other disease and in comparison, from an economic point of view, syphilis and cancer are relatively unimportant. One person in ten dies of tuberculosis and one person in three between the ages of fifteen and forty dies of this disease. It kills the most valuable, most productive members of the community.

And while only one case of advanced tuberculosis in fifty gets well, ninety per cent. of the incipient cases under proper conditions, are cured and again become useful members of society.

It is, therefore, self-evident that one of the most important factors in dealing with this disease is its early accurate diagnosis.

But in tuberculosis, the earlier the disease, the fewer the signs and symptoms, the less certain and exact are their character and the more difficult their interpretation.

The diagnosis of advanced tuberculosis is easy—it can frequently be made across the room—but in the early case, in the case that offers a good chance of recovery, the symptoms are vague, the signs indefinite and ordinary casual observation and examination are not sufficient. More exact and careful methods must be used, more prolonged and careful study must be made; in fact, every possible method, instrument and device must be utilized.

It is not sufficient to determine whether or not the patient has tuberculosis—it must be determined whether the tuberculosis is active, quiescent, latent or healed. It is also necessary to determine whether the patient is in need of sanatorium treatment, or merely observation and repeated examinations at stated intervals, or whether he should be treated for something else or not treated at all. This is not easy and the physician that makes a diagnosis and recommends treatment should realize the importance

*Read at 71st Annual Meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

of his decision to his patient, to the patient's family and to himself.

It is not a simple matter to the patient to give up his occupation, change his whole mode of life, leave his family; neither is it just to the patient to let him ride along in ignorance until he has developed an advanced incurable disease and infected several other members of his family, nor is it a matter of small importance to the doctor to have the advanced consumptive damn him up one side and down the other for not recognizing his condition until too late.

The same care, skill and diligence should be used in diagnosis of diseases of the chest, as is now customary in surgical conditions in the upper abdomen. The day of snap-shot diagnosis is past. It is no more reasonable for a physician to make a diagnosis of pulmonary tuberculosis on a drooping shoulder or loss in weight, than it is for a surgeon to make a diagnosis of gastric ulcer on the presence of a tender spot in the epigastrium. There are still men that are willing to make a diagnosis of gastric ulcer and advise operation, without a careful history, thorough physical examination, x-ray, gastric analysis and stool examinations, but these men are few and getting fewer because their patients are demanding more careful consideration of their ailments.

With the most careful study, with the utilization of all the diagnostic aids at our command, many mistakes are made in the diagnosis of pathological conditions in the upper abdomen. There are just as many mistakes made in diagnosis in diseases of the chest.

A careful surgeon would not remove a kidney because his patient had blood in the urine. He would insist upon repeated examinations of the urine, x-ray examination of both kidneys and bladder, cystoscopy, urethral catheterization and pyelograms before he made a definite diagnosis and decided on what to do. In fact, he would get all the evidence possible before making a decision.

Is it any more reasonable for a physician to make a diagnosis of pulmonary tuberculosis because his patient spits blood? This single finding should be amplified by further study, examination and observation.

That greater care is needed in diagnosis of diseases of the chest is clearly shown by the report of Stivelman in the January, 1921, number *American Review of Tuberculosis*. "In an anal-

ysis of seventeen hundred consecutive cases in which a diagnosis of pulmonary tuberculosis had been made, a further examination showed that one hundred and seventy-six cases were found to be suffering from something else than tuberculosis. There was an error of 10.4 per cent. These cases were classified as follows:

Chronic Bronchitis	32
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If there is this high percentage of error in the *positive* diagnosis of tuberculosis, how high must be the percentage of error on the negative side—in cases that really have tuberculosis and are told that they have something else? It is safe to assume that it is two or three times ten per cent.

It is a common procedure, when in doubt, to wait for developments. In many cases this is absolutely necessary, but in the majority of instances this waiting policy is unnecessary and dangerous. It is unnecessary because, by the use of other instruments of examination than the stethoscope—that is, the x-ray and even the doctor's constant companion, the thermometer—by intensive study, an accurate diagnosis can be made without waiting. Waiting is dangerous because frequently by the time a diagnosis can be made on positive signs alone the patient has passed from the curable to an incurable stage.

On the basis of diagnostic ability in diseases of the chest, most doctors can be divided into two groups: enthusiasts and non-enthusiasts. The enthusiasts are chiefly those men especially interested in tuberculosis—the so-called tuberculosis specialists. Many of them are inclined to see nothing but tuberculosis and to call everything in the chest tuberculous in character.

The group of non-enthusiasts, by far the greater number, are men interested in other special lines of medicine and surgery or in general practice, and they are inclined to call any pathological condition in the chest everything else but tuberculosis until the disease is so well advanced and has progressed to a stage that it is incurable or curable with great difficulty.

If I may be permitted to criticize, the fault with both these groups of men is that because of

one reason or another, lack of time of the doctor or the patient, lack of facilities or expense, are inclined to make a snap-shot diagnosis rather than a careful study and careful analysis.

In other words, in the diagnosis of diseases of the chest the same methods should be used as in diagnosis of any diseased condition in any other part of the body. It should consist of the gathering of all the possible evidence from all sources, subjective and objective, followed by a careful analysis with a resulting logical conclusion.

This takes time, means work and is expensive, but because of the seriousness of the disease to the patient, the great responsibility taken by the doctor and the great difficulty in making an accurate diagnosis in many early cases of pulmonary tuberculosis, I am firmly convinced that the doctor is justified in taking the time and the patient should pay for doing the work. It certainly is as important to make a diagnosis of early tuberculosis as it is to make a diagnosis of gastric ulcer.

A careful case analysis consists of the following:

The history is probably the most important single item in the case study. It should be complete, not merely a recitation of the symptoms commonly associated with tuberculosis. Let me cite an instance: A young lady of 20, about January 1st, of this year, suddenly lost weight, ran a low grade fever, complained of pain in the chest, had a cough, and slight expectoration. On the basis of this history and physical examination alone she was informed that she had tuberculosis of the lungs and should "get out of this climate right away." Not satisfied with this advice, her father took her to another physician who could not co-ordinate the marked constitutional symptoms with the almost negligible findings on physical examination of the lungs. The physician insisted that she enter the hospital for observation. More careful history taking revealed the fact that her illness started with a sore throat, that she had had painful and swollen joints early in the disease and x-ray, physical examination, and blood culture revealed the fact that she had septic endocarditis.

The physical examination should be complete—not of the chest alone, but of the whole body. Frequently bad teeth, chronically inflamed tonsils or other seat of low-grade chronic infection can

produce all the constitutional signs of pulmonary tuberculosis, such as loss of weight, anemia, lassitude, digestive disturbances and low-grade fever. The same is true of hyperthyroidism.

In the physical examination of the chest, the finding of rales is by far the most important sign. Inspection and percussion gives us valuable information, but practically all of the signs elicited by these methods are the signs, not of early active tuberculosis, but advanced, latent or healed tuberculosis. I can fully agree with Laura-son Brown when he says "Kronig's tone planes, Goldscheider's method of percussion and Riviere's bands of impairment as well as palpation of muscle spasm have not proved of great value. Auscultation is more important than inspection and the detection of rales by auscultation of the inspiration following cough is the most important procedure in the detection of physical signs of early pulmonary tuberculosis."

Temperature and pulse curves are our most important guides to the presence of general intoxication. The cardiac and heat regulating mechanisms of the medulla are extremely susceptible to metabolic changes and especially those produced by intoxications, and the presence of an abnormal pulse and temperature curve frequently differentiates an active tuberculosis needing treatment from an inactive or healed condition needing only follow-up and observation.

You will notice I said pulse and temperature curve. In tuberculosis, as in all chronic conditions where there is no great deviation of the temperature and pulse reading from the normal, a single reading is of very little value. The pulse rate may be increased by excitement, fatigue, fear, or any other emotional state. The temperature may vary as much as a full degree above or below the normal, on the Fahrenheit scale, due to these same or other causes, such as outside temperature, local temperature of the mouth, the clothing of the patient, etc.

The only satisfactory temperature and pulse record is that which is taken at stated intervals of the day (every four hours) over a period of several days with the patient at rest in bed. It is always preferable that this record be made by someone who knows how—by a nurse or some other person in whom the doctor has confidence. Under these conditions, any persistent or con-

sistent temperature ranging above 99.2 or below 98 degrees F. is of great significance.

There is one sure and definite sign of pulmonary tuberculosis and that is *the finding of tubercle bacilli in the sputum*. This method of examination is certain, sure and positive and with laboratories, both public and private at hand, there is no excuse for omitting this method in any case, suspicious, advanced or far advanced.

Errors are possible in this method of study, particularly on the negative side. The absence of tubercle bacilli in the sputum does not eliminate the possibility of tuberculosis and frequently several specimens of sputum may be negative and another specimen contain numerous bacilli. In a suspicious case, one examination of the sputum is not sufficient—at least three or four examinations should be made before we are content to say the sputum is negative. While it is true that there are cases in which the tubercle bacilli do not appear in the sputum until shortly before death, these cases are comparatively rare and in many instances in which the symptoms, physical signs and even x-ray findings are indefinite or lacking the finding of the tubercle bacilli in the sputum clinches the diagnosis. "It will never harm any patient to have his sputum examined as much as it will harm the reputations of some of us to omit it." (Lawrason Brown.)

Roentgen-ray examinations, fluoroscopic and radiographic, especially stereoscopic radiograms, have done much to advance our knowledge of pulmonary tuberculosis and to confirm or deny our physical examinations of the chest. The pathological changes shown by the x-ray are consistently greater than those found on physical examination. Frequently no definite signs can be found on physical examination and very definite changes found with the x-ray.

It is also true that definite changes are found with the stethoscope and no increased densities are seen on the x-ray plate. Neither method is complete nor is either method indispensable—but are complementary. They reveal pathological changes entirely different in character. The x-ray reveals changes in density or consolidation; the stethoscope reveals changes in moisture content in the lung, or exudation.

I wish to emphasize that every radiographer does not take plates of the chest suitable for the study of pulmonary tuberculosis and that good

and bad plates may be grossly misinterpreted and I wish to emphasize that a diagnosis of pulmonary tuberculosis (except perhaps in advanced cases where the x-ray is really not necessary to determine the presence or absence of tuberculosis) should never be made by a radiographer unless he is willing to take the time to confirm and co-ordinate the x-ray results with history, physical examination and other studies. The radiographer is quite as guilty of snap-shot diagnosis and opinions as any one else.

Tuberculin has a distinct place in the diagnosis of tuberculosis, but with the perfection and more careful utilization of the other methods already mentioned, is of less importance than formerly. In my hands, the tuberculin test is used only when the other studies have been completed and are still inconclusive.

The cutaneous or Von Pirquet test is of value only in young children of less than eight years of age. The cutaneous, ophthalmic, percutaneous, and intradermic tests in adults are of little value. They merely show that at some time or other the individual has come in contact with tubercle bacilli and has an increased sensitiveness to tubercle bacilli products. It does not tell us whether the tuberculous process is active, inactive or healed.

The subcutaneous test, in adults, used in conjunction with repeated physical examinations of the chest before and after injection is frequently of value in making certain equivocal or uncertain signs.

If a patient reacts sharply to the subcutaneous test with a rise in temperature of more than one degree, general sensations of intoxication, such as joint pains, and does not have any increase in the findings of the chest either by x-ray or physical examination, then it becomes a question of very fine decision as to whether treatment is or is not indicated. The subcutaneous tuberculin test is of very great value in deciding many questionable cases.

Other special tests, such as examination of the blood, red cell, white cell and differential cell counts, the Wassermann test, the determination of basal metabolism and other examinations are valuable in differentiating tuberculosis from other pathological conditions that produce similar symptoms, such as pernicious anemia, chlorosis, syphilis, Hodgkin's disease, leukemia, etc.

After all of the examinations have been made, including a complete history and physical examination supplemented by a temperature and pulse record, several examinations of the sputum, stereoscopic radiograms, tuberculin test and other special examinations, the results must in the end be co-ordinated. This is the most important thing of all in making the diagnosis.

Those attributes that differentiate the good physician and careful diagnostician from the mere gatherer of technical information, must be utilized to their greatest extent—the use of a logical mind and common sense.

DISCUSSION.

Dr. C. E. Cole, Jacksonville emphasized the importance of the history of previous illnesses, especially the recent past history which includes the temperature and pulse curve. It has come to a point where a good many patients do this on their own initiative and learn to take their temperature before and after exertion, and record the exact temperature and pulse, and find what their daily swing is.

As to the x-ray, he thinks it is a mistake to put a patient under the fluoroscope or x-ray before you look him over and get all the facts, and his plan is to have the lesions outlined by physical examination, using the x-ray to confirm the findings. Patients say they are having no fever, though they may have several degrees at varying times during the day, but they are not aware of it because they have good resistance.

Dr. Albert R. Trapp, Springfield, from experiences in the army with tuberculosis work agreed with Dr. Pettit. The Government did the best it could. A careful history was taken of the patient as to previous illnesses. We had eye, ear, nose and throat men and two dentists there and the teeth were looked over, the blood count and Wassermann reaction were taken on every man and feces and urine examination were made, and at least five sputum examinations were made of each case. One had to be at least a twenty-four hour specimen and one at least a certified specimen coughed up in the presence of the nurse or ward surgeon. That this was necessary was shown by this case: a man who knew that discharge could be secured in this way, had a man whom he knew to have tuberculosis expectorate in his mouth and then he went out and coughed this up in the presence of the nurse.

In the South we found many hook-worm infections, tooth infections, tonsil infections and infections of the gum. The Government wanted to know whether they could depend upon these men or whether they would break down in service. They wanted all the men they could get, but did not want any invalids. It cost \$5,500 to equip a man ready for France and fighting and they did not want to waste any money. We were not allowed to use the tuberculin test. The reason was that while it revealed the presence of tubercularis, it

did not reveal the extent and whether it was active or inactive, and what they wanted was to find to what extent the man was tubercular, whether the lesions were healed to a sufficient extent so that he could render active service. Auscultation and physical signs revealed what the Government wanted to know—whether the man had been and if he was tubercular. In cases of doubt the patients were hospitalized, and some of the leading men of the country spend three or four hours on examining a man's chest and then keep the man in the hospital for three or four days before rendering a diagnosis.

Dr. Roswell T. Pettit, Ottawa (closing the discussion): The plea of my paper is not intended for tuberculosis alone but for the utilization of more complete examination and study of our patients. Not by extreme and difficult methods that may require years of training for some one particular man, but the methods which all of us can utilize, which we have at hand here in Illinois. If we will use what we have we will be able to save some disastrous results for our patients and ourselves.

DIAGNOSIS AND TREATMENT OF CANCER OF THE LARGE BOWEL.*

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The early recognition of malignancy of the large intestine is unusual in most cases. This is due to two reasons. The chief cause of our failures is that cancer of the intestinal tract from the ileocecal region to the anus progresses to an inoperable stage in many cases before the patient has any indication that disease exists. The caliber of the gut permits of an annular growth extending at times several inches along the wall without any stenosis. The blood and pus arising in the ulcer of the growth are mixed with the fecal stream and are not noticed by the patient. At times a patient suffering from a bloody diarrhea due to cancer of the rectum is unaware of the presence of bright blood in the stools until his curiosity has been aroused by the questions of his consultant. Many patients having seen blood in the stools make their own diagnosis and ask the druggist for one "pile cure" after another.

The chief symptom that brings the patient with cancer of the colon or sigmoid to the physician is obstruction, partial or complete. Constipation with diffuse colic-like pains is usually the record of weeks or months before examina-

*Read at 71st annual meeting of the Illinois State Medical Society, at Springfield, May 18, 1921.

tion is made. Occult blood in the stools is a frequent finding. Cancer of the rectum occasionally is brought to the knowledge of the patient first by bright blood in the stools.

The insidious onset of the disease is the most common cause of delay. Another element which causes a still further delay is laxity of diagnostic effort. As a matter of precaution, no patient with blood in the stools should be diagnosed as hemorrhoids until it is proven that cancer is not present.

When once our suspicion of malignancy has been aroused, it is not difficult in most cases to

gion. A carcinoma of the large bowel of sufficient size to give symptoms will cause a defect in the outline of the gut that may be a mere hiatus in the shadow, or may show a defect of possibly two inches. It is not safe to rely upon a photographic plate without a fluoroscopic examination, as peristaltic incisura may be mistaken for tumor and vice versa. At times the defect in the bowel may be covered over by an adjacent loop which rides over the diseased area and the shadows are superimposed.

Cancer of the rectum up to 17 cm. above the anal orifice does not require fluoroscopic examination, as it can be detected up to this height by digital examination or by visual examination through the proctoscope. It is well to remove a section from the rectal tumor for microscopic examination even though the appearance is typical.

An acute or chronic diverticulitis of the large gut will duplicate the symptomatology of cancer in almost every respect. The two conditions can not always be differentiated after the abdomen is opened. Whenever possible, tissue should be removed for microscopic examination.

A polyposis of the large bowel will frequently give pain and blood, both occult and visible, in the stools. Examination with the proctoscope will often show one or more polyps in the rectum. Fluoroscopic examination with the barium enema fails to show any filling defect in the profile of the gut.

Tuberculosis of the large bowel is usually in the ileocecal region, and occurs in decreasing frequency along the gut progressing toward the anus. Cancer is more frequent in the distal portion of the large intestine, and is seen in decreasing frequency in the proximal portion. Tuberculosis of the large bowel is frequently accompanied by tuberculosis in other portions of the body, usually in the lungs. The filling defect in tuberculosis of the large bowel is of a different character than that caused by cancer.

Treatment of cancer of the large bowel merits more optimism than that usually accorded it. Cancer of the colon has been given a prognosis that is hopeless by many writers. True, it is black enough, but a case now and then will be saved by wide dissection.

Enlargement of the lymph glands is not always a contraindication, as this enlargement may

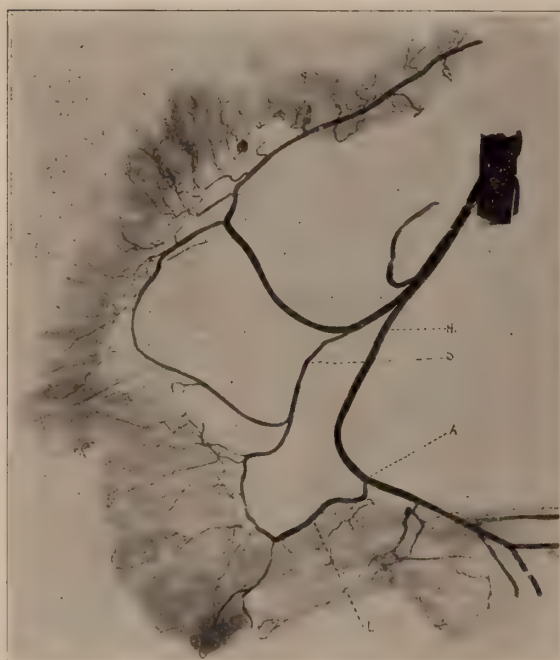


Fig 1.

H.—Superior hemorrhoidal artery.

S.—Sigmoidal artery.

A.—Last anastomotic loop of the marginal artery. Ligation of the superior hemorrhoidal artery below Point A resulted in gangrene necrosis of the gut distal to the level of the ligature.

run down a definite diagnosis. Repeated chemical tests of the stools for occult blood is positive in most instances of large bowel cancer. This is due to the ulcerating center of the tumor. The profile of the entire colon is readily determined by the injection of a barium enema under fluoroscopic control. The examiner in a darkened room observes the enema as it distends the ampulla of the rectum and gradually ascends through the various portions of the colon to the ileocecal re-



Fig. 2.—Retention barium passed into the bowel as an enema under fluoroscopic control. The barium distending the ampulla of the rectum and lower sigmoid passed up against the carcinomatous obstruction in the region of the junction of the upper sigmoid and lower descending colon. With some pressure it passed into the descending colon. Plate was made at once showing a defect in the sigmoid.

Arrow indicates site of carcinoma.

be due to inflammatory reaction from the ulcerating crater of the tumor. I have a number of cases alive five years following resection, in whom every gland examined showed malignancy. One case in whom the cancer had involved the levator and ani muscle is alive eight years following wide resection.

End to end or side to side anastomosis is, of course, ideal in the various portions of the colon. Where the mass involves that portion of the rectum below the peritoneum an end to end anastomosis is not satisfactory as failure of union occurs in most instances, resulting in death or permanent fistulae. Total enucleation of the rectum is indicated in this type of growth. This is done by varying technic. Formerly, the so-called Kraske method was the operation of choice—amputating the diseased portion of the rectum and bringing the end of the gut into the upper portion of the incision—leaving the patient with a sacral anus. More recently the abdominal incision has been added to permit of a more radical removal of the disease. No one procedure

is applicable to all cases of rectal carcinoma. Indications vary with the age, sex and general condition of the patient. Very stout persons are better operated on by the Kraske route. The advantages of the combined operation are a more radical removal of the disease, a better opportunity to determine operability, and to make the proper type of abdominal anus. When the bowel is pulled through the abdominal wall with no redundant gut the feces are constantly escaping, but where a long redundant loop is left, this portion of the bowel acts as a reservoir and many cases have but one stool a day when bowel movement is obtained by enema.

Various type of two-stage operations are employed to meet varying conditions. The mortality of the combined route with experienced operators is now as low as that of the sacral operation.

With greater optimism and more radical methods, more patients will surely be alive five years



Fig. 3.—Case of Diverticulitis developed during a period of approximately two weeks resulting in an acute obstruction. Patient was sent to the operating room with a diagnosis of carcinoma of the sigmoid. Operation showed a plastic peritonitis with a thickened mesocolon, but no evidence of malignancy. Proctoscopic examination through the anal route and through the colostomy failed to show any carcinoma.

Arrows indicate diverticula filled with barium. The tumor mass pinching off the caliber of the bowel is shown at Point A.

after the discovery of cancer than under some of the former ideas.

DISCUSSION

(Abstract)

Dr. C. J. Drueck, Chicago: The question comes up with so many who refer cases for operation for rectal carcinoma—can you save the sphincter? Carcinoma of the rectum should never be treated with the idea of getting an artistic result. A carcinoma high enough up to leave a good healthy piece of bowel below so that we can do an intrapelvic anastomosis is not carcinoma of the rectum. Carcinoma at the rectococcygeal junction down at the pelvic floor presupposes a complete cleaning out of the rectal pouch and terminal bowel. Most of our failures have come where we have failed to recognize the plan which Dr. Black emphasized in his paper on carcinoma of the breast, a complete excision of the whole area and tributary areas. If we operate on carcinoma by any method we must advise the patient beforehand, no matter how trivial the condition of the epithelioma of the anus is, that a colostomy is necessary. He produces a colostomy to begin with. There is no artistic feature to carcinoma of the rectum.

Dr. R. W. McNealy, Chicago: In a case transferred from the medical service that had been observed for some time, a man 48 years old who had lost weight, suffered more or less from gastric disturbances, had some blood in the stool, a barium enema was given, a picture made and some fluoroscopic work done. On opening the abdomen no carcinoma at the rectosigmoidal junction was found, although the picture and the fluoroscopic examination indicated that carcinoma was present. He had a very vascular appendix, the lumen of which contained a considerable quantity of clotted blood. Evidently this man had been bleeding from his appendix. These cases are not so very rare. The point I want to bring out is where you use a barium enema it should be done very thoroughly, that is, fluoroscopic examination should not be hastily done and a picture should be taken of this area. This man had a long mesosigmoid. His sigmoid could be taken out of the left side and brought over to the anterior superior spine of the right side. Evidently in the picture and in the fluoroscopic work the man had what we ordinarily call a volvulus of a long mesosigmoid which gave a picture of obstruction at this point and also interfered with the free passage of the barium meal. I believe in careful examination so as to make no mistake.

Dr. George P. Gill, Rockford: Every method should be tried out many times. In a recent case a very complete diagnostic laboratory reported mucous colitis. Within two weeks a palpable tumor was easily found in the prone position. Many times previous to this I failed to elicit this palpable mass in the knee-chest position. I wish to call attention to the fact that a mass on either side of the abdomen can be brought down so it can be felt by inserting the palpating finger in the rectum while the patient is in the dorsal posi-

tion when it cannot be felt in the knee-chest or in the prone position.

Dr. E. H. Weld, Rockford: I was very much interested in the diagnosis that Dr. Davis brought out and I want to emphasize the point Dr. Gill made of bimanual palpation. The value of the different laboratory procedures in making the diagnosis is of interest. One of our common diagnostic procedures in all cases is the urine test and we wonder of what value that is. Wassermann tests often give more routine positive results than urine tests do. I made a record recently of the number of cases that were examined rectally. Out of 50,000 cases examined in the clinic with which I am connected, only three per cent. of those cases had been sent for proctoscopic examination. Out of that three per cent. one-third gave positive proctoscopic findings. The majority of those cases were hemorrhoids. Of the number that gave positive findings there were six per cent. carcinoma. Practically all of those tumors could be felt by bimanual examination with the examining finger.

Dr. Carl B. Davis, Chicago (closing): Just one point, I would examine the patient with the fluoroscope while the barium was going in. You can determine the caliber of the bowel with your eye while the barium is gradually going in.

FACTORS DETERMINING THE EFFICIENCY OF OPERATIONS UPON THE STOMACH*

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Over a third of a century has elapsed since the foundations of gastric surgery were laid, and curiously enough since this time hardly a single revolutionary method or principle has been developed. Technical modifications and improvements have been brought forward and have changed the nomenclature, but the methods of partial gastrectomy of Billroth; of enlarging the pyloric orifice of Heinecke, Mickuliz, and Kocher; and of gastro-intestinal anastomosis of Wolfer, Nicoladi, Van Hacker and Roux remain the standard basal procedures in this field. Even more strange is the fact that no enduring physiologic basis for the treatment of peptic ulcer by gastro-enterostomy has been developed. Twenty years ago gastro-enterostomy was considered the one certain and satisfactory method of treating peptic ulcer, and it was quite generally accepted that the ulcer healed because of the good drainage established by the operation. Time has

*Essay on Surgery, read before 71st Annual Meeting of the Illinois State Medical Society at Springfield, May 18, 1921.

shown that the early optimism as to the operation was not justified, and causes for the many therapeutic failures have been faithfully sought. Small openings and the use of the Murphy button early came in for censure. Moynihan reported perfect results when the opening in the stomach was made obliquely downward to the right; Mayo, good results when the oblique incision ran down to the left; Moynihan thought he had bad results from the Mayo method; the Mayos, bad results from Moynihan's method; but neither method gave perfect results, and with trial of vertical incisions and incisions following the individual inclination of the jejunum the open pylorus was blamed for failures. But the methods devised for pyloric occlusion often failed to produce occlusion and experience showed that ulcers healed without the occlusion and that they sometimes failed to heal despite pyloric obstruction. While the years have demonstrated the importance of the short intestinal loop, of absorbable sutures, of a free opening placed well toward the pylorus, and of a free, unkinked and non-rotated jejunum, kept well without the lesser peritoneal cavity; they have also shown that gastro-jejunostomy is in a sense a makeshift operation, often insufficient in gastric ulcers, although giving better, but far from perfect, results in duodenal ulcers.

After all of this period of trial and experimentation, there is no generally accepted physiologic compass to guide the operator in correcting pathologic conditions of the stomach. Too often he picks an operation because he is fond of it or is experienced in its use or because Dr. "So and So," whom he admires, uses it, rather than because he has an adequate physiologic reason for its use in the particular case. As a result, surgeons have created, by their operations, a new field of gastric pathology, and the treatment of symptoms resulting from operations on the stomach now looms large.

May we not now collect from various sources sufficient material to give us at least a partial physiologic basis in our work? Are there not enough logical principles from which we may develop certain systematic guides? Presented in a brief and sketchy way, our impressions are as follows:

The stomach with its J shape hangs nearly vertically. It may be long and narrow, or wide

and short, well tucked up or hanging to the upper pelvis and yet function well, provided there is no kink or distortion of the duodenum. The stomach, like the jejunum, functions best as a free intraperitoneal organ. Operations that fix or immobilize the stomach may do harm as do conditions that free the duodenum and ascending colon from their normal fixed and retroperitoneal positions. The gastric mucosa is very loosely attached to the overlying muscularis, favoring plastic operations. The hydrochloric acid of the gastric juice comes largely from the glands of the mucosa of the prepyloric area, the glands of the fundus of the stomach having few chief cells and the mucosa of the antrum being protected by glands secreting a faintly alkaline mucus. Swallowed liquids, if not coagulable, quickly pass along the lesser curvature of the stomach and out through the pylorus. The solid food taken tends to pile up in fairly distinct layers. In the prepyloric area and antrum, the food is kneaded, churned, acidulated, peptonized, while the food taken last and awaiting chymification is held in the reservoir-like fundus and may continue to be alkaline in reaction with progressive ptyalin digestion for twenty or thirty minutes after ingestion. The antrum, which bears the brunt of irritation not only from the marked muscular contractions of this portion of the stomach, but also from the acid chyme, is normally protected not only by its bland alkaline mucous secretion, but also by the normal reflux of alkaline duodenal fluids through the relaxed pylorus at the completion of each period of gastric digestion.

It is my opinion that the bile and pancreatic juice form the great normal resting medium for the stomach; soothing, neutralizing and protecting the gastric mucosa after its period of greatest irritation, and favoring a cessation of the motor activity of the organ. Bile in the stomach does not, as many believe, produce nausea and while it may stimulate peristalsis in the intestines, it does not in the stomach. When we finally vomit bile in irritation of the stomach, this occurs after the stomach has expelled its irritating contents. The bile has been regurgitated to coat and protect the organ and certainly it is not the cause of the nausea; otherwise the normal regurgitation of bile into the stomach about two and one-half hours after each meal

would not so uniformly mark the resting period of the organ, or a cholecystogastrostomy produce no evidence of gastric irritation. Retention and decreased motility, other things being equal, tend to increase the amount of free and combined acid in the stomach, as shown by a fractional test meal. Increased motility and rapid emptying tend to reduce the acid values despite a very free secretion of hydrochloric acid. It is obvious then that pylorospasm favors high acid values and gastric irritation, while rapid emptying and the free access of duodenal fluids into the stomach tend to reduce irritation and acidity. Ingested alkalies stimulate acid secretion, and the passage of all the bile and pancreatic juice into the stomach does not completely neutralize the normal acid secretion.

Parloff has shown the marked stimulus to gastric secretion by ingested meats and meat extractives in contrast with the slight stimulus from fats, cereals, yolk of egg. The hormone, digestin, is probably a minor factor in influencing the flow of gastric juice.

The motility of the stomach depends upon the intrinsic ganglia of Auerbach lying between the muscular layers, and upon stimulating impulses through the vagi which are the motor nerves of the stomach; the sympathetics producing inhibition. We can conceive, therefore, of pylorospasm from vagatonia leading to high acid values and the symptoms of gastric irritation or ulcer and the converse.

The motor drive of the stomach is toward the pylorus, even when the pylorus is occluded. With an open pylorus and even a large gastroenterostomy opening, it frequently occurs that none of the food passes out through the new opening. Indeed, a gastroenterostomy has a surprisingly little influence upon motility and the emptying of the stomach. Patterson¹ thinks that gastroenterostomy has little influence on the emptying of a stomach of unimpaired motility and mentions that we no longer have reason to consider gastroenterostomy a drainage operation, except in cases of obstruction. Hartman, Soupalt, Rydygier and Rosenheim go further and even believe that the motility of the stomach is permanently impaired by the operation. The average of 30 per cent. reduction (Patterson) in the gastric

acid values after the operation must be attributed largely to the influence of the duodenal fluids entering the stomach through the new opening. These duodenal fluids also give an increased amount of mucus to coat the walls of the stomach, and probably reduce gastric motility and may act in other ways favorable to the healing of gastric ulcer.

Apart from the influence of the gastric peristaltic waves the opening of the pylorus is stimulated by three things: well acidulated chyme on the gastric side; the neutralization of the acid chyme on the duodenal side of the pylorus (Canon); and the ileo-pyloric reflex. This triple mechanism prevents the passage of poorly chymified food through the pylorus, the passage of unneutralized acid chyme beyond the second portion of the duodenum, and the distension or overloading of the small intestine. While Dunn found that the passage of all of the bile and pancreatic juice into the stomach does not completely overcome the gastric acidity, the acid chyme received in successive spurts in the duodenum normally is completely neutralized before being passed on. The contraction of a ring of muscular fibers of the duodenum acts as an efficient sphincter protecting the lower duodenum until this neutralization occurs, and the pepsin which does not become active until acidified is permanently destroyed in the duodenum by this process of alkalization. The ileo-pyloric reflex, like the block system on our railways prevents harmful congestion of the small bowel by maintaining pyloric closure until the ileum has emptied through the ileo-cecal valve, and rationally explains pylorospasm and gastric symptoms from appendiceal or cecal disease. After the destruction of the pylorus, the duodenal ring or Oschner's muscle replaces the pyloric sphincter, and for the best results, therefore, anastomotic operations to the stomach should be made above the duodenal sphincter. For this reason, probably the Billroth No. 1 is a better operation than the Billroth No. 2 or the Polya method of partial gastrectomy.

The protection of the intestinal mucosa from the chyme should be carefully considered in all anastomotic operations with the stomach. As the bile and pancreatic juice partially protect the stomach, even more so do they maintain the integrity of the mucous lining of the upper intes-

1. Section 7, Surgery. XVII International Congress of Medicine, P. 17.

tine. Except after gastroenterostomy, peptic ulcer is rare in the intestine below the first part of the duodenum, or in other words, below the point of concentration of the bile and pancreatic juice. After anastomotic operations of the stomach, the incidence of secondary marginal or jejunal ulcer is inversely proportional to the degree of concentration of bile at the area of anastomosis. For example, these secondary ulcers are practically unknown after gastro-duodenostomy, occur in 2-6 per cent of the cases after no-loop gastro-jejunostomy and in a progressively larger proportion of cases after the long loop gastro-enterostomy, after anterior gastro-enterostomy and the Roux anastomosis en Y. The location of these secondary ulcers illustrates well how the concentrated bile and pancreatic juice protect the bowel from the erosive action of the chyme. In animals ulceration of the duodenum follows the separation of bile and pancreatic ducts from the duodenum and their implantation into a lower part of the intestine. In six out of seven dogs in which Exalto drained the duodenum into the colon so that no bile entered the end of the jejunum attached to the stomach, ulceration of the jejunum tending to perforation rapidly followed.

A strip of litmus paper dipped in bile is changed by acid chyme more slowly and less intensely than an untreated portion, and the film of mucilaginous duodenal fluid that spreads through the gastroenterostomy stoma and covers the ulcerated area, we believe to be one of the great reasons why peptic ulcers heal after gastro-jejunostomy. Gastroenterostomy is less effective for ulcers out of the direct path of the duodenal fluids that pass from the new stoma along the mucous surfaces to the pylorus. Contrast the relative efficiency of the anastomosis for duodenal and pyloric ulcers, and especially its relative inefficiency for gastric ulcers not close to the pylorus. We have been trying for some time to treat these ulcerated areas directly by arranging for the continuous discharge of concentrated bile over the lesion, with or without the preliminary excision of the ulcer, by what we may term a cholecysto-ulcerostomy. A fairly large cholecystogastrostomy is made, using the opening left by the excision of the ulcer or the ulcer bearing area. While the results have been good in selected cases, greater time and experience is

necessary before we can arrive at positive conclusions or determine if the pancreatic juice is also necessary for healing.

We must consider also that ulcers at different periods of their existence may respond to very different forms of treatment. An ulcer originating from a focal infection or traumatism may at first persist from a lack of physiologic protection from the highly erosive acid chyme. Such ulcers may heal rapidly after the amount of duodenal fluids in the stomach is increased by a gastroenterostomy, pyloroplasty or a cholecystogastrostomy. With an old ulcer the early factors may disappear,—there may no longer be hyperacidity or even normal acidity, and the ulcer may persist from the dense sclerosis of base and edges interfering with the blood supply to the ulcer. For such a chronic ulcer, excision or the Balfour cauterization may be entirely efficient, while a gastro-enterostomy, which would have been useful in the early stage of the ulcer, is perhaps useless and not indicated. For some of these chronic sclerotic ulcers, we are using a method of layer resection of the ulcer with transplantation of the wound in the mucosa. The adhesions and cicatricial tissue overlying the ulcer are split or excised to the mucosa, which is mobilized about the ulcerated area and pouts into the wound. After all of the diseased mucosa is trimmed away, the thin healthy edges of mucosa are united in a line producing the least tension or constriction. The wound in the mucosa is transplanted by transfixion sutures under healthy vascular muscularis and the overlying tissue united in a way to produce the least deformity. If near the pylorus, it is often much easier to handle the adherent tissues in this way than by a formal pyloroplasty or Finney operation.

In summarizing, the following points may be emphasized:

In operating upon the stomach, we should as far as possible follow physiologic guides to avoid the production of post operative pathologic processes.

We should individualize more in cases of gastric ulcer and avoid a common rule of treatment. The use of gastro-enterostomy should be restricted in the treatment of ulcer. In high acid values and in increased motility it is more logical, but more likely to produce marginal ulcer than when there are low motility and low acid

values without obstruction. The operation should always afford free access of the duodenal fluids to the ulcer, and with hyperacidity should be placed as close to the ampulla of Vater as possible. In chronic ulcer with sclerosis and low acid values without obstruction, excision and suture or cauterization is more logical than gastroenterostomy. Gastro-plication or gastric fixation by suture for gastrectasia and gastroptosis have little to commend them.

Division or destruction of both pylorus and the duodenal sphincter should be avoided if possible in partial gastrectomy, pylorotomy and pyloroplasty. Anastomoses to the stomach should as far as possible be made above the duodenal sphincter to protect the intestine from over distension. The fatal angle of the Billroth No. 1 operation has disappeared with the use of better methods of suture, and this method is to be preferred to the Poyla or Billroth No. 2 resection when practical.

More attention should be given to cecum mobile, the dilated, kinked or mobile duodenum, the ileo-pyloric reflex and the reflex from chronic thoracic disease to avoid useless or harmful operations upon the stomach and appendix.

2033 Walnut Street.

USE OF DOUBLE SNARES IN TONSIL OPERATIONS

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Realizing that the last word has not been said in regard to the tonsils and operations for their removal, I have the temerity to speak of a matter of technique which I have found satisfactory in my work.

I might say, as a preface, that I make use of the Boettcher hook in making the delivery of the tonsil from out its bed and thus hold the tonsil against the ramus of the jaw much as is done in the Sluder operation. Freeing of the pillars and dissecting back the mucous membrane is made with one of the several instruments to be had for this purpose, taking care to have a good margin of mucous membrane left on the pillars. This is accomplished by following very closely and carefully the margin of the tonsil. Throats thus treated are much more comfortable immediately following operation, there is less liability to hemorrhage and the subsequent healing is much

more satisfactory and rapid than where this care is not taken.

With the patient turned to the right side, the lower, most dependent tonsil, the right, is liberated. A wire snare is then placed about the right tonsil, several turns of the instrument are made so as to engage well the tonsil, then the snare is allowed to rest lightly in the hands of the assistant or the right hand of the anesthetist. Another snare is now taken up and is made to engage the left tonsil; its dissection being made after the first or right tonsil is engaged in the snare.

At this point one is in a position to slowly or rapidly remove both tonsils at one and the same time, thus to my mind limiting the amount of blood lost as was had where one snare was used, not to mention the freedom of operating in practically a bloodless field.

I can therefore recommend this slight suggested change in technique. In the many clinics it has been my privilege to attend and the work of others which I have been observing, I have never seen this two snare method used, and so give it here that others may try it and perhaps find use for its adoption in their work.

State Bank Building.

THE INFLUENZA BACILLUS OF PFEIFFER; ITS NUTRITION AND ITS RELATION TO RESPIRATORY INFECTION*

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Of all pathogenic organisms of interest to medical men in recent years the influenza bacillus of Pfeiffer has easily held the front rank—the reason of course being the prevalence of the recent pandemic of influenza. It may be opportune now since this disease has practically disappeared to discuss briefly this organism in the light of certain new data accumulated during and since the epidemic period.

My own work has been along two chief lines. First, a study of the nutrition of this organism; and second, a study of its distribution and relation to respiratory infections.

*Read at a meeting of the Chicago Medical Society, October 5, 1921.

I shall not go into detail as regards its ordinary properties. Of its various characteristics one of the most interesting is its relation to blood. Blood or hemoglobin is absolutely necessary for its growth—an important property, since it indicates at once that we have to do with an organism that must live in most intimate relation to the animal body for nowhere else in nature does hemoglobin occur. This hemophilic property was observed by Pfeiffer in 1892 and the organism stands almost unique to this day in this respect. In a further analysis of this hemophilic property recently I have encountered certain new and interesting facts.

If blood or hemoglobin media is heated to boiling or less for a short time (a few minutes) it will still yield a good growth of these bacilli. If boiled for a long time (one to 2 hours) or if heated to a higher temperature in the autoclave for even a few moments then its value as a culture media for this organism is lost. But its cultural value is regained, or we may say, the media may be reactivated by adding a small amount of any one of a large group of substances—namely, ascites fluid, serum, animal tissues (free of hemoglobin of course), plant extracts of various kinds (like carrot or potato), dead or live bodies or extracts of bacteria of various kinds or of yeasts, etc. Inorganic substances do not so behave. Heating any one of these substances in the autoclave for a short time will render it inert for purposes of blood media reactivation. From these experiments it becomes clear that we are here dealing with the interaction of two substances in this nutritive process. Either one alone will not support growth of this bacillus. The two combined will do so.

The one is hemoglobin or one of its heat derivatives which is a relatively stabile body. It is an iron containing substance and has been shown to be hematin or hemin. Either compound will so serve. Other derivatives not containing iron, like hematoporphyrin and hematoidin, and iron compounds, both organic and inorganic, will not so behave. Up to a certain point there is a parallelism between this process and the positive guaiac reaction; which of course suggests that oxidation plays a fundamental role here. But the guaiac reaction is positive for a far greater number of substances and in other respects appears to be a different phenomenon.

The second substance is a labile substance destroyed at autoclave temperature in a few moments or at the boiling temperature in one to two hours. It will pass through filter paper and through porcelain filters without appreciable loss. It seems to deteriorate on standing and is injured by hydrogen peroxide. It resists acids but appears to be susceptible to alkalies. It is found generally in the juices of both plants and animals. Serum, ascites fluid, extracts of heart, liver, brain, kidneys, etc., and also extracts of plants, especially carrots and potato, contain it in abundance. Bacteria and various yeasts and related organisms like blastomyces or sporothrix, living or dead, or extracts of these organisms are rich in this substance. It will appear from the above facts that we are dealing with a substance with many of the properties of the so-called vitamins, substances which we now recognize as necessary for the life and growth of animals.

These two special substances are necessary in addition to other nutritive substances like protein compounds or peptone. Hemoglobin alone which contains both these bodies will not support the growth of this organism. This suggests that these two bodies do not themselves serve as food for the bacteria, but somehow through their interaction control other nutritive processes of the organism. As to the real nature of this process we know as much or as little as we know of the mechanism of the action of vitamins in higher organisms. The possibility exists that through the study of such processes in the lower and simpler forms of life we may be able to more clearly analyse analogous or comparable processes in the higher forms. For example, it would seem that in this process, as it concerns the influenza bacillus, the second substance somehow controls the metabolism of iron and through this element which is a vital necessity for life processes controls other metabolic activities, especially those dependent upon oxidation changes. Similar substances may control metabolic processes dependent on other elements. In this connection it is interesting to refer to a comparable process to which McCollum¹ and his associates have recently called attention. They found that a vitamin body appears to bear a definite relation to phosphorus metabolism in the causation of rickets. From

¹ Johns Hopkins Hosp. Bull., 1921, XXXII, 160.

their results with rats, it would appear that the phosphate ion plays an important role in the origin of this disease and perhaps kindred diseases. They point out that the level of blood phosphate is in all probability determined in part by the amount of the fat soluble vitamine A available for the needs of the organism. Thus an interplay seems to exist between the vitamins and certain elements in the body a deficiency of either leading to defective nutrition. I mention these processes as being analogous to the interplay between the two substances necessary for the growth of Pfeiffer's bacillus.

As a result of the analysis of the peculiar nutrition of the influenza bacillus it is now possible to satisfactorily explain the phenomenon of symbiosis or satellitism as observed in this organism. When grown with another bacteria or yeast or with plant or animal tissue, especially on plated media, the influenza bacilli near the foreign tissue or organism will grow profusely, often forming large giant colonies. This is explained thus: From the foreign organism or tissue there diffuses into the immediate vicinity this second vitamine substance which in conjunction with the hemoglobin or its derivatives furnishes the proper mechanism for the growth of the influenza bacillus. In the absence of blood or hemoglobin no such stimulating effect is noted in media about the foreign tissues or bacteria.

Practically every organism will reveal this stimulating phenomenon toward the influenza bacillus. I have tested all the ordinary bacteria and also many yeasts and all behave alike. The only possible exceptions were certain large saprophytes which yielded a high content of alkali or acids and which prevented the growth of all bacteria in the immediate neighborhood on the plates.

It is interesting that the influenza organism or its extract will not stimulate itself. This at once suggests the use of this method in the identification and differentiation of related bacteria about which there are disputed points. Recently the committee on classification of the Society of American Bacteriologists have formed a new group or genus of bacteria based upon the hemophilic property, and named *Hemophilus*. Pfeiffer's bacillus is placed here and named *Hemophilus influenzae*. The pertussis bacillus, the Morax-Axenfeld bacillus, the Ducrey bacillus of soft chancre and the Koch-Weeks bacillus are all

placed in this genus. I have tested these different organisms and all will stimulate the influenza bacillus (except possibly the Koch-Weeks bacillus); so on this basis they may be differentiated from this latter organism. Many different strains of influenza bacilli of Pfeiffer, for example, strains isolated during the epidemic, strains from influenza meningitis, from various respiratory infections and from normal throats have been tested and all fail to reveal this symbiotic phenomenon toward each other.

As to other means for the further differentiation of Pfeiffer's bacillus no very concordant results have been obtained. Slight differences in morphology, in certain cultural tests, production of indol, hemolysis, sugar fermentations and serum reactions have been noted by various workers. But many such differences are inconstant or are difficult to correlate and no well defined groups with constant features have thus far been generally recognized. That the strains belong to a more or less heterogeneous group we must admit; however there is no evidence of the existence of epidemic strains with definite and constant characteristics.

Another point worthy of mention is that this bacillus finds in animal tissues not only nutritive substances such as albumins or their derivatives but also these vitamine like bodies which serve to enhance its growth in a very special way. Not only will animal tissues so serve but other bacteria as secondary or mixed infections may also enhance its development. This has been shown experimentally.

The distribution of influenza bacilli is now fairly well known. Naturally since it must have blood it cannot live except in close association with the animal body. It therefore must die out soon after leaving the body. In the lower animals it is not known to occur in normal or in pathological states. I have searched the throats of many guinea pigs, rabbits and dogs without finding it.

In man it is a very common inhabitant, limited largely to the respiratory tract in normal and pathological states. In its distribution in this tract it is very similar to the streptococcus hemolyticus. In normal throats in both adults and children it occurs roughly in from 10 to 40 per cent. or even higher and often in large numbers (Pilot). It occurs almost constantly in whooping cough and very commonly in

measles, tuberculosis, influenzas and catarrhs, varicella, bronchitis, meningitis, lobar pneumonia, pharyngitis and sinus infections. In the terminal conditions, especially pneumonias of these different infections, it is common and abundant. On the whole it appears to be more numerous in the respiratory tract in pathological states than in normal states. Summing up the evidence at hand from the extensive studies made before, during and after the last epidemic, I think we may fairly conclude that no specific differences have been made out between the bacilli in the various respiratory infections including the epidemic influenza. As stated, all attempts by different workers to make out a definite epidemic strain of influenza bacilli as the cause of the influenza epidemic have failed (Park and Associates). And the slight differences already noted—cultural, morphological and serological—existing between strains are not known to indicate specificity for a given disease.

This point should be emphasized. Because of the prevalence and the very wide distribution of Pfeiffer's bacillus in the normal and in persons suffering with a great variety of respiratory infections, studies upon the incidence of this organisms are not of great value in any attempt to determine its relation to a given infection or epidemic. This point was responsible, I feel, for many erroneous conclusions that have been drawn in connection with earlier studies.

The impression should not be gained that, because the evidence is decidedly against the existence of epidemic strains of Pfeiffer's bacillus, it is a relatively harmless organism. No better example need be given than the occurrence of the so-called influenza meningitis caused by pure growths of this bacillus; 90 per cent. of these cases are fatal. And it may cause endocarditis, pericarditis, pleuritis, arthritis and other infections from which lesions the bacillus may be grown pure. Experimentally, too, for both humans and animals it may have distinct pathogenic powers. In the human, inoculation with pure cultures will at times cause a definite infection. But no one has reproduced a clinical picture that could be called typical influenza. Many workers have caused pneumonic lesions by intratracheal injections having certain features in common with influenzal pneumonia in humans. Such lesions do not justify the conclusion, however, that the bacillus is the cause of

epidemic influenza. They justify only the conclusion that this bacillus is pathogenic and may be an important and common secondary invader in this disease, just as the pneumococcus or the streptococcus may be. Pneumococci and streptococci by intratracheal injections cause in animals lesions simulating closely at times the pneumonic lesions of epidemic influenza, but we rightly regard them as secondary organisms in this disease. From these facts we may readily see how the controversy has arisen as to whether the influenza bacillus of Pfeiffer (as held by some) or the pneumococcus (as held by others) is the primary cause of epidemic influenza or whether they are merely secondary but often fatal invaders. The burden of proof of course rests with the one making the positive assertion as to the role of a given organism and until the evidence is far more convincing and more generally agreed upon with respect to a given organism the only rational position to assume, it seems to me, is that Pfeiffer's bacillus, the pneumococcus and certain other bacteria seriously considered by some workers as primary are merely secondary opportunists invading a tissue already prepared for them by some agent which has thus far eluded us.

In conclusion, then, we may say the influenza bacillus of Pfeiffer is one of our common throat bacteria found in a high percentage of persons at any time and often in large numbers. It is found more frequently and more numerous in respiratory infections. No convincing evidence exists that it is the primary cause of pandemics of influenza or of any other respiratory epidemics. Biologically it is unique in its relation to blood and requires not only the ordinary constituents of media but also the presence of a vitamin or vitamin-like body in conjunction with the blood pigment for its existence.

THE EX-SERVICE CARDIOPATH.*

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The class of cardiopaths under consideration is restricted to those ex-service men coming under the ministrations of the United States Public Health Service in its efforts to classify them for the benefits of this service. These are all am-

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bulatory cases. That some of them are proper subjects for hospitalization is beside the question, because of difficulties in instituting hospital care, chief of which is the attitude of the subject himself who, having undergone repeated examinations during service and since discharge, regards the interest of the Public Health Service as simply further routine necessary to fix his status in relation to compensation or training and is inclined to disregard the medical aspect of it.

The peculiar psychology of the soldier is evident here in disinclination to regard his condition as anything serious. He believes his ills will fly away in time and almost resents inquiry into the actual state of his health.

There are some features of these cardiopaths which are new to us since the war. We have been unacquainted with the elements of gas effects, shell-shock with its attendant physical and mental strain, as well as with the effects of over-rapid training on the circulation, followed by immediate introduction into the activities of modern warfare.

There has been considerable discussion as to the effect of gas and shell shock in the production of chest pathology, and aside from their influence in promoting associated infections no very definite conclusions seem to have been reached. As far as the heart is concerned we find both endocardial and myocardial pathology in soldiers who apparently had no definite infections, but who were hospitalized for gas or overstrain.

Not having their hospital history at command, and being obliged to depend on statements of the subject himself which, however, are fairly definite as a whole, we must be cautious in estimating these conditions as etiologic factors.

During the last two years I have examined 2,500 of these men and have taken at random one hundred for illustration. These cases fairly represent the whole series as far as the character of the lesions is concerned. Of this number 39 were classed as aortic, 52 as myocardial, and 9 as mitral. The latter, of course, does not include those relative mitral leaks secondary to aortic or myocardial conditions. Sixteen gave definite hospital history of gas effects; 13 of influenza; 5 of pneumonia; 5 of rheumatism, and 15 of heart trouble. The rest were hospitalized for wounds, injury and various incidental troubles.

The small percentage of mitrals were mostly double mitrals which undoubtedly carried this lesion into the service, but in such an indefinite condition as to escape detection until developed by the strain of training or of active service. All things considered, the small percentage of organic mitrals found in this series must be considered as a tribute to the efficiency of the draft and training camp examiners.

One is impressed by the fact that only between 50 and 60 per cent. of these cases gave a definite history of infection, which might stand in etiologic relation to their heart trouble. We must, therefore, depend on other factors for the occurrence of 50 per cent. of the cases.

The most surprising thing is the large number of aortic lesions, about 40 per cent. in young subjects in otherwise good physical condition, without a history of frank rheumatism, without syphilis, without arterio-sclerosis, the three conditions we are taught to associate with these lesions when appearing in later life.

About 10 per cent. of these aortic cases gave a more or less indefinite history of rheumatism or of heart trouble in service, which might have been infective in nature, and about 6 per cent. gave a history of influenza or pneumonia, leaving the great majority to be explained on noninfective grounds. Practically all of the cases without a history of infection had seen active service on the fighting front. A few of those with a definite history of infection had only a training camp history. It would seem, therefore, that the physical and nervous overstrain of life in the trenches must be a potent factor in producing these aortic lesions even in the absence of infection. It is impossible to get an idea of the force of this factor from the men themselves in their individual cases. They will tell you that life in the trenches is hell, and then dismiss the subject.

The diagnosis in these aortic cases rested on the academic conditions of basic murmur, usually double, enlarged left ventricle, femoral signs of varying intensity, and a pulse pressure abnormally wide, though the systolic pressure was frequently normal or not more than ten points high. Characteristic radial or capillary pulse was not, as a rule, present. Subjectively their complaints were of shortness of breath, precordial pain, dizziness and palpitation. The pain, I think, an unreliable symptom, as many seemed to think it

something to be complained of where their attention was called to their heart. The cases classed as myocarditis, a term used because of the necessity of a definite diagnosis, were exclusive of myocardial changes secondary to endocardial lesions. They include slightly over 50 per cent. of the cases. Twenty per cent. of these had a gas history, and about 25 per cent. an influenza history; 10 per cent. were not hospitalized, and the rest had been in the hospital for wounds and various infections.

Objectively, they presented cardiac enlargement with an apex from seven and a half to ten cm. left of midsternal line, in the fifth space or under the sixth rib, precordial murmur with no definite transmission, weak first tone, occasionally a relative mitral systolic, a plus second pulmonic, and femoral signs from faint to moderate. Subjectively there was short breath, precordial pain, dizziness and occasionally palpitation. Slow pulse below 66, was observed in a few cases. Variation in pulse rate from rest to exercise was from 40 to 60. Change of pace was frequent, but irregularity only presented in the marked cases.

We will admit that from a pathologic standpoint, objection might be made to the classification of some of these cases, but with an evident myocardial insufficiency in the presence of such symptomatology, we think the nomenclature justified.

From the fact that gas, influenza and other infections account for only from 50 to 60 per cent. of these cases, we must conclude that here, as in the aortic cases, physical and nerve overstrain must have been an important factor in their development.

The prognosis is of great interest, but uncertain, because of our ignorance regarding certain factors in the equation. If ideal conditions of environment, regulation of physical effort, diet and medical treatment could be maintained over a sufficient length of time, the prognosis would be quite favorable, but with the uncertainties attending the fulfilling of these requisites, it is extremely probable that the next decade will develop an immense number of badly crippled hearts among these ex-soldiers.

Hospitalization does not meet the needs of the situation, because the majority of them are not subjectively ill enough to submit to such meas-

ures for a sufficient length of time to obtain results.

Education as to hygiene, habits, diet, regulation of physical effort and proper medical supervision is necessary. Many of these men are trying to hold down jobs, which are too strenuous for them; and which will surely cause their early and complete breakdown. Economic conditions are, of course, largely responsible for this situation, but still ignorance and indifference on the part of the individual is a dangerous factor. Hospital is not the remedy for, as before remarked, most of these subjects will not, for various reasons, remain there. Their medical care cannot be sufficiently individualized to obtain the best results. Most of them are not, at present, ill enough to appreciate the necessity of hospital care, even if it exists.

Regulation of their daily life may be difficult, but it can be accomplished to a sufficient extent in most cases to ward off the dangers of progressive deterioration. Medical treatment is important, but secondary and useless, if the activity and daily life of the subject is not properly regulated.

There is no class of patients in which it is more important to see that they get the proper remedy, of definite quality, in individualized amount, at correct intervals, until definite effects are obtained, and such effects can only be obtained by careful supervision of the individual.

This situation can be handled only by the family doctor. He must take a close interest in these patients, regulate the diet, habits and amount of work they shall perform. He must examine them often enough to know whether they are doing more work or more strenuous work than they are able to do with safety, and this supervision must be monthly and continuous for several years.

The out-service department of public institutions might do much in the way of safeguarding these subjects, but it obviously cannot be in the close and continuous contact with this class of patients, which is necessary if they are going to be protected from future trouble. The family doctor must be responsible. He must be positive and insistent upon the carrying out of his instructions by the patient.

Thus with the intelligent and conscientious aid, which he is able to give, we may hope to avoid

the progression of these ambulatory cardiopathies into helpless cardiac cripples.

SUBPHRENIC ABSCESS*

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I have taken up this subject tonight in the firm belief that a careful consideration of its etiology, and an equally careful watchfulness for the earliest signs of its advent will do much toward diminishing its incidence and its terrible mortality.

I have purposely limited my remarks to certain features of the disease which have received less than their deserved attention in the literature, and the paper is not to be regarded as at all an attempt to cover even briefly the entire field of diagnosis, much less those of anatomy and treatment. If I can focus your attention upon the fact that subphrenic abscess, in this region at least, commonly arises from failure of early diagnosis and treatment of retrocecal appendicitis, I shall be satisfied.

Certain outstanding facts relating to subdiaphragmatic suppuration seem to have escaped the attention of writers. This omission, like so many others in medicine, is presumably because only those seeing a considerable number of instances of the less common diseases are able to generalize as to their peculiar characteristics. While making no claim to any extraordinary experience with subphrenic abscess, I shall mention briefly some of the reasons why I feel justified in emphasizing my own views upon the subject.

In our community more than in some others with which I am familiar, acute abdominal diseases as a rule come under the joint observation of the internist and the surgeon. My close association with the surgeons of five of our Denver hospitals has given me a broader field for observation than I could possibly have had without such co-operative effort.

I believe you will readily credit another factor as contributing to the opportunity to study this abdominal complication in Colorado. It is certainly more common, in my opinion, in sparsely settled regions inaccessible to considerable medical centers, than in compact and more thickly settled communities. Denver lies in the center

of a group of states comprising approximately one-fourth the territorial area of the United States, but containing only perhaps one-thirtieth of the population. There are scores of counties in this area with but a single physician. In such a region the hardy inhabitants frequently fail to secure early medical attention in acute abdominal troubles when it often means the calling of a physician from fifty miles away. In a considerable number of cases which I have seen, the patient has been examined with the local physician at some ranch far from the nearest town. Frequently the Doctor has not been called until the trouble was well advanced. More often the patient has been sent to a Denver hospital, when the disease had developed under similar circumstances.

The corollary to this general statement is perhaps at first sight a contradictory one,—namely—that the frequency of subphrenic abscess is perhaps the best criterion for judging of the acuity in abdominal diagnosis of the internists of a community, and the skill of its surgeons.

To state the question boldly, we should recognize that subphrenic abscess is largely a preventable complication of abdominal diseases, and cannot occur with great frequency in large cities or thickly settled communities without casting reflections upon the skill of the local profession. The comparative rarity of the disease in the experience of many internists and surgeons with whom I have discussed the subject is to be placed to their credit, since it indicates that they have had the opportunity through early attendance, and the ability to ward off this complication, and have taken full advantage of the situation. In other words, a population so situated as to be able to command early and reasonably skillful medical attendance will, in large measure, escape this affection.

As to the etiology, we cannot deny the possibility of its occurrence as a metastatic invasion in the common infectious diseases in which transmission of infection occurs through the blood stream. I have never seen a case, however, in which some suppurative process in the chest or abdomen did not furnish a satisfactory explanation of its origin.

An interesting change as to the recognized etiology of the disease may be noted in certain quarters by comparing the statistic of the '90s,

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with those of the present time. It was shown two or three decades ago in some tables that peptic ulcer and suppurative appendicitis pretty evenly divided the honors, leaving but a small percentage of the cases to perforating cancer of the stomach, to gallbladder disease, pancreatitis, empyema, and all other possible causes. The improvement in the diagnosis, and especially in the treatment of peptic ulcer—and more especially of its acute complications—has pretty well relieved this disease of its evil notoriety. Thus, of 16 of my cases analyzed in 1915, but one came from ulcer, while 10 came from suppurative appendicitis—the others scattering. A much wider experience in the years since that abundantly confirms this statement.

I believe the disparity in statistics from various cities and countries as to the incidence and the etiology of subphrenic abscess is capable of satisfactory explanation if we go beneath the surface. For example: Fagge, in the *Lancet*, has recently stated that 80 per cent. of the London cases originate in peptic ulcer, believing that early operation and the use of the Fowler position have pretty well done away with the complication in appendicitis. I do not think this position necessarily incompatible with my own. His statistics come from one of the two most populous centers of the world, where the element of lack of early medical attention is certainly not so prominent a feature as in the sparsely settled region which I have studied. The English surgeons have presumably been very keen as to early operation in appendicitis. Given equally early and skillful attention, I believe that appendicitis offers more hope of avoidance of subphrenic abscess than surgical ulcers of the stomach and duodenum. In the former disease, the infection must travel—and consequently must take time before it reaches the region we consider. A suddenly perforating gastric or duodenal ulcer may, on the other hand, instantly start the infection which leads to the abscess. The attendant cannot be held responsible in these cases while, strictly speaking, nearly all the appendiceal ones are avoidable if we control the case from the start. This is especially true in the extra peritoneal cases traveling upward by a slow, spreading cellulitis.

The first reaction in your minds may be that an equally great improvement has taken place in

the diagnosis and treatment of appendicitis during this time. I grant this in part only. The ordinary normally placed appendix, whether affected with acute or chronic disease, and even if perforated, is certainly pretty well taken care of by the profession everywhere. But this is not the common source of origin of subphrenic abscess.

I am sure that a review of your cases will lend support to my statement that the retrocecal appendix is the usual cause of subdiaphragmatic suppuration, and that many cases of chronic disease of the organ in this position escape recognition and sooner or later furnish the basis for an acute but at first unrecognized suppurative attack with the dire consequences we so often see in the upper right quadrant of the abdomen.

The state of advancement of the pathological process is greater at the time of operation than in simple appendicitis, and the danger of an ascending infection is multiplied.

It is in chronic, retrocecal appendicitis that we occasionally see the pelvic plaster cast applied, or the left heel raised, or the right kidney opened for supposed stone, or the patient treated for hypothetical sciatica, and all because of a lack of appreciation of the varied symptomatology of the retrocecal appendix, and more particularly the lack of proper physical examination.

The value to the profession of the description by the great surgeon who first defined it, of the "McBurney point," is indubitable. The teacher of this day should, however, call attention to the great danger of overlooking the malposed appendix by a slavish following of the rule to palpate the region mentioned without equal and even more especial care to make sure of any findings far to the right and, as a rule, somewhat higher than the McBurney point as well as any in the pelvis. The failure to find the latter signs is attended by no such grave consequences as accompany the disregard of the extra-cecal manifestations of appendiceal inflammation.

Those teachers and practitioners who fail to recognize the importance of the chronically inflamed appendix as the most important single cause of indigestion, and as the starting point of more pathological mischief in the abdomen than is originated by any other condition, have a heavy responsibility to bear for the needless occurrence of subphrenic abscess as well as of

peptic ulcer, and other affections influenced as to their origin by the commonly associated hyperacidity, chronic fecal stasis, etc.

The neglect of chronic cholecystitis is fortunately less common, and certainly, so far as its influence upon subphrenic abscess is concerned, less serious.

We seem to be in still better plight as regards peptic ulcer, for the appearance of increased pain and tenderness is generally accepted by open-minded physicians as reason for at least a surgical consultation. The gradual decrease of surgical complications from ulcer in our own community during the past two decades is most gratifying. In similar manner extensive peritoneal involvement with localized abscess formation is, I believe, somewhat less frequent from perforations of other origin, notably from pancreatic disease, typhoid fever, dysentery, tuberculosis and cancer, since earlier intervention is the rule. The improvement as to the early diagnosis of empyema has pretty well eliminated this disease as a cause of the condition we are considering, although it never was a frequent contributor.

Fortunately, the days of attributing symptoms of disease in the lower right quadrant to the right ovary and tube, or, in this region and in the right loin, to the right kidney, without first and above all else giving consideration to the appendix as the commonest and therefore first-to-be-considered cause, are pretty well past. We have no quarrel as to a properly fortified diagnosis of pelvic disease, nor with one of renal trouble when supported by modern means of renal diagnosis, but, as many of you must have done, I have seen a dismal procession of patients who have suffered from unsuccessful and unwarranted operations upon the right kidney for non-existent calculus and other supposed ills, who have been cured by proper diagnosis and operation. In the face of a subacute appendicitis such delay is always dangerous.

Our greatest effort in the attempt to prevent subphrenic abscess should then be directed toward the early diagnosis and relief by early operation of retrocecal appendicitis, either acute or chronic. I confidently believe that far more than half of all cases may be thus eliminated.

I believe that one with a reasonable experience with appendicitis may not only judge which ones

of a series of cases are likely to be so complicated but that it is occasionally possible to predict the disease. Thus, in one of the base hospitals a soldier was admitted during the last days of July, 1918, with a bad, suppurative appendicitis. I called the attention of the surgeon to the thrombosis to be seen in the small veins leading upward from the appendix. I left the next day for a thirty-day leave of absence, but asked the surgeon to watch with especial care for the occurrence of the complication which we considered. On the 16th day after operation, following a period of daily rise of temperature, with tenderness above the site of operation, a subphrenic abscess was found by exploration with the needle,—was promptly treated more radically, and the man was convalescent upon my return to duty. I think such a case carries a most impressive lesson to the willing student of abdominal disease. It certainly illustrates an occasional, if not a common means of transmission of the infection upward. A small hepatic abscess resulting from septic embolism and rupturing through the superior surface of the liver may easily explain such an origin.

I quote several paragraphs from a paper read before the Kansas City Academy of Medicine in 1915, as I cannot improve upon the statements there made:

The cases originating above the diaphragm, generally from an empyema, are not very common (18 cases in 488—Archibald). Where pus has existed both above and below a perforated diaphragm, I have in several instances been puzzled to know whether the abscess had originated in the chest or the abdomen. The presumption on the numerical basis favors the latter origin.

Of the bacteriology, we may merely state that the abscess originating above the diaphragm often yields the pneumococcus, but otherwise the ordinary cocci of suppuration and the colon bacillus are rather to be expected. Amebae, ray fungi, and many other organisms have been found.

In neglected cases I have several times seen red inflammatory edema over the right anterior and lower chest wall and the upper abdomen far to the right. The diagnosis may practically be made at a glance in such cases, but is likely to be so late as to be of little service to the patient. I recall such edema in but a single left-sided case, due to the rupture of the gall bladder in an acute cholecystitis of typhoidal origin, the left pleura having been reached via the lesser peritoneal cavity.

The thoracic signs are of extreme importance, since the abscess often comes nearer to the dorsal surface

than to that of the abdomen. The pushing up of the diaphragm and hence of the lung, with dullness in place of the normal pulmonary resonance, is the first and most striking sign in many cases. Barnard records pleuritic friction in but seven out of seventy-six cases. I have found it in a larger proportion of my own cases and do not doubt that if systematically sought it should be found in perhaps half the instances of posterior subphrenic abscess and in many of the anterior varieties.

Barnard, and other authors, so far as I know, have failed to mention one variety of pleuritic friction which I described many years ago and which was present in the left-sided case of subphrenic abscess just quoted. I refer to the friction just above the region of the spleen, which gives the first intimation that an abscess involving the lesser peritoneal cavity has spread beneath the diaphragm, finally caused a diaphragmatic pleurisy, and thus led to the involvement of the parietal pleura. Such cases are likely to be followed by empyema as in this instance. (*New York Medical Record*, October 17, 1908.)

There is a failure in many articles which I have read upon this subject to mention the not infrequent presence of a secondary effusion above the diaphragm in cases in which the purulent collection below it has set up so violent an inflammation as to lead to transference of the infection through its substance. It is not necessary that a gross perforation of the diaphragm should be present. In fact, the occasional finding of a serous or merely cloudy effusion in the pleura when a definite abscess exists in the subphrenic space is sufficient evidence that the pleural exudate is irritative in character and not perforative in origin. Rolleston states that in such cases the lower and purulent collection is commonly overlooked. Unless the Roentgen picture shows the diaphragm distinctly at the top of the area of disturbance it is necessary to consider the possibility mentioned.

The lung is, of course, compressed by the crowding upward of the diaphragm, and dullness above the line of that, due to the abscess, may originate from compression of the lung tissue or from an actual inflammatory exudative process. In either event decrease of the respiratory sounds or the advent of the signs of a pneumonia may be noted.

Both sides of the chest may be involved if the subphrenic abscess be bilateral. Cough, hiccup and marked dyspnea may be notable symptoms. The heart is occasionally displaced laterally, but commonly by the secondary pleural

effusion. The displacement found in simple subphrenic abscess is commonly upward rather than in a lateral direction. In the cases in which the abscess breaks through the lung and a large cavity is left, the resulting contraction of the lung may displace the heart far toward the affected side—the right one in the cases I have observed. Of 16 of my cases, 7 ruptured through a bronchus, two into the right pleura, two into the pericardium, and one each through the colon and stomach. In one of the cases in which rupture through the bronchus was noted, a gas-containing abscess could be followed upward to the neck upon the x-ray plate.

It is obvious that certain of the cases of rupture through the bronchi might have been classed as rupture into the pleural cavity if they had come under observation at an earlier period. It is also to be recognized that earlier opportunity for diagnosis and operation might have saved the day in many of the cases. Of these 16 cases the cause was appendicitis in 10; typhoid in 1; gastric ulcer in 1; gunshot wound, 1; abscess of prostate, 1; pneumonia, 1; abscess of lung, 1; 11 of them left the hospital alive, but at least 3 had a pulmonary fistula persisting, and remained, to the best of my knowledge, invalids for life.

The most difficult cases from the surgical standpoint are those rather unusual ones which rupture through the arch of the diaphragm and burrow upward in the mediastinal space, as in two of my cases mentioned above. In neither could successful surgical measures be carried out, and I doubt if they ever can be. One had been unsuccessfully operated on for a supposed empyema by two different surgeons in other cities before I saw him, although, in my opinion, upon entirely insufficient physical signs. The expectorated pus, in large quantities, had so strongly suggested an empyema that both surgeons operated because of the suggestion regardless of the absence of the usual signs of empyema. Dr. H. R. McGraw found in this case a lung cavity communicating with a bronchus near the right mediastinum. It was successfully drained, but the patient died some weeks later after an attempt to collapse the chest wall over the cavity.

These are the cases in which, as in another patient of mine, even twenty attempts to locate the abscess with the needle may be unsuccessful, the reason being that there exists a mere track from

the abdomen to the dome of the diaphragm, and it is too far in from the periphery to be reached by the aspirating needle. Operative measures are at best a desperate resort in such cases.

The serous character of the pleural exudate in simple pleurisy, the non-odorous pus in empyema, and the fetid pus, often containing food particles, and accompanied by foul gas, in subphrenic abscess, are sufficiently characteristic of the respective affections. The offensive odor of the pus expectorated from a subphrenic abscess which has ruptured through a bronchus should suggest to the attendant the true diagnosis, since in ordinary empyema such odor is unusual. The possible changes in position of the diaphragm in the three diseases serve to vitiate any conclusions drawn from the exact site of the aspiration. The occurrence of secondary irritative effusion above the diaphragm in subphrenic abscess may cause confusion unless the possibility be recognized. During operation, in different cases, I have seen Drs. Craig, Freeman and Perkins each in doubt as to whether pus was above or below the diaphragm until the latter was actually palpated after the incision. Such doubt is commonly avoidable by use of the x-ray, but exact diagnosis is often possible only by exploration. When I state that I have recently seen a case of empyema in which four grossly different varieties of fluid were withdrawn from different punctures, and in which the pericardium, as felt by Dr. Craig through the operative wound, contained yet another effusion, one can easily understand the possibilities when fluid also exists beneath the diaphragm. The occasional perforation of the diaphragm, with open connection between the two cavities involved, must be thought of, and the possibility of opposite-sided pleural involvement as well.

Strauss, of your own city, has recently reported a case of comparative rarity, namely, a subphrenic abscess due to amebic infection. It should be recognized that this slowly traveling type of infection tends to weld together the upper surface of the liver, over the primary liver abscess, the diaphragm, and both layers of pleura, and to empty through a bronchus. We see the late complication of amebic dysentery then, either as a hepatic abscess or as a hepato-pulmonary abscess, with expectoration of the characteristic

contents, but with great infrequency either as a subphrenic abscess or an empyema.

Jones, of New Orleans, who has perhaps had as wide an experience in this disease as any one in our country, has informed me that he has never recognized either of these complications, and certainly none has come to my own attention. The more virulent type of infection accompanying appendicitis and ulcer commonly does not hesitate long enough in its progress to allow such complete sealing of the spaces through which it passes, and we have every intermediate stage as a frequent phenomenon, namely, paranephric abscess, subhepatic abscess, abscess of the lesser peritoneal cavity, hepatic suppuration, subphrenic abscess, empyema and abscess of the lung with perforation of a bronchus.

The roentgenological evidence of the healing of a subphrenic abscess which has emptied through the lung must be a comparatively unusual finding. While in conference with Dr. Hamilton P. Jones of New Orleans, the chief of medicine of the Base Hospital at Fort Bliss, Texas, I was asked to look at a very unusual x-ray plate. It had been taken in a routine way in the examination of a young soldier who presented no symptoms in any way referable to the findings. Running upward from a tented area near the center of the left diaphragm was a dense string of scar tissue, ending where it met the large inferior branch of the left bronchial tree. Inquiry revealed that the man ten or twelve years before had had a long illness with much abdominal distension and distress, and his attendant had told him that the abscess had broken through the lung. There was the definite history of the sudden expectoration of a large quantity of foul pus. I have repeatedly known a large cavity to be left in the lung, with prolonged exhausting suppuration, shrinking of the side of the chest, displacement of the heart, even bowing of the spine concave to the affected lung, or septic arterial embolism from emboli, evidently originating in the branches of the pulmonic vein surrounding the lung abscess, but such complete healing has not been recognized in any of my cases of perforation of the lung. Amputation at the lower third of the thigh was necessary in one case of embolism. The comparative freedom from these dreadful complications in amebic hepato-pulmonary ab-

cesses, so far as my experience goes, with fair recovery, is in striking contrast.

Wahby reported 59 cases of subphrenic abscess from St. George's Hospital, of which over 50 per cent. were of the gaseous form. The well recognized frequency of this variety in cases originating from peptic ulcer, with the fact that probably less than 10 per cent. of the cases I have seen were of gaseous type would tend to confirm my statement that the appendix seems to be the usual source of origin in the great majority of cases in this region.

I cannot credit the statement of Fagge and others, that gas in subphrenic abscess most commonly originates from the colon bacillus infection. This organism exists in all appendiceal cases, yet pyopneumothorax subphrenicus is probably five times as common in cases arising from peptic ulcer where a free communication with an air or gas-containing viscus is well recognized. Yet gas, when present in abscess arising from the appendix, is doubtless generally of bacillary origin.

I need not speak of the surpassing importance of the x-ray in the detection of subphrenic abscess. It has rendered the failure of early diagnosis much less excusable than it was in days gone by.

Prognosis: Cases of subphrenic abscess are very commonly fatal because they are not recognized in time for effective operation. They die of sepsis or perforation with prolonged exhausting suppuration, usually after a course of from six to twelve weeks. I have stated elsewhere my belief that, under the best of conditions 80 per cent. might be saved by operation. Barnard believes that 16 per cent. mortality would be the best possible under any conditions. When we compare the relative dangers to the patient of an early appendectomy and of the attempt to cure subphrenic abscess surgically, we are, in my opinion, criminally negligent if we fail to set forth the advantages of early operation to every patient in the early and safe period of his attack of appendicitis. In an average thousand cases of this disease unoperated on, we should probably lose ten times as many from this single complication as any fair surgeon, if he operated on the entire number on the first day of the attack, would lose from all causes combined. We may speak no less positively as to the urgent need of early operation

in other surgical affections of the abdomen. It is an important part of the treatment of these difficulties to steer the patient away from the complications which may render his curable disease a fatal one.

I am indebted to Drs. Childs and Crosby for the excellent roentgenograms shown herewith.

IMMUNIZATION AGAINST DIPHTHERIA WITH TOXIN-ANTITOXIN MIXTURES.*

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Diphtheria is one of the most fatal diseases among children. From 1911 to 1920, 8,167 deaths from diphtheria occurred in Chicago. During the same period the combined deaths from measles, whooping cough and scarlet fever were 6,333, being only about three-fourths as many as those from diphtheria alone. In the twenty years before antitoxin came into general use in the treatment of diphtheria (1875-1895), an average of one person to each 650 inhabitants died yearly from the disease. In the following twenty years (1896-1916), when antitoxin was generally used, an average of one person to each 2,666 of the population died yearly from this disease. Thus the number of deaths from diphtheria in the first 20 years of antitoxin were less than one-quarter of those in the previous 20 years. Further reduction in the death rate followed more intelligent use of antitoxin, hospitalization of cases which could not receive proper care at home, isolation, school inspection, etc.

In spite of all this the results are not satisfactory. From 1901 to 1910, one person out of every 3,416 living in Chicago died from diphtheria, while from 1911 to 1920, one died out of every 3,000. In the last ten years there was a relative increase. On an average over 800 deaths from diphtheria occur each year in Chicago.

It has been impressed upon sanitarians and public health officials that with the methods heretofore employed little improvement is to be expected.

Ever since vaccination against smallpox had succeeded in preventing the disease when properly and universally used, there have been hopes

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among medical men that similar methods of preventing other infectious diseases might be found. Vaccination against typhoid fever is a recent realization of the hope. We now appear about to have a new demonstration of an efficient method of vaccination against a very fatal disease, i. e., diphtheria.

We often speak of some procedure in medicine as being discovered by an individual. In almost all instances the discoverer appropriated the results of previous observations and experiments which had gradually accumulated until it was possible to make practical use of the accumulated knowledge. This was true of diphtheria antitoxin, although we credit Behring with its discovery. He only applied the knowledge acquired by a long line of investigators during many years. He again performed a similar service as regards the immunizing use of mixtures of diphtheria toxin and antitoxin, adapting to human need the results of numerous earlier investigators.

All the details regarding diphtheria antitoxin were learned through extensive studies in laboratories on experimental animals. They could be learned in no other way. In a similar manner the immunizing properties of suitable mixtures of diphtheria toxin and antitoxin were first determined for experimental animals in the laboratory and then the knowledge was applied to man. The use of the toxin-antitoxin mixture is based on as sound experimental data as that which led to the adoption of antitoxin 25 years ago.

In 1907, Theobald Smith¹ called attention to the fact "that an active immunity may be produced in guinea pigs by mixtures of diphtheria toxin and antitoxin which, after subcutaneous injection, produce no local lesions recognizable during the life of the animal, no general disturbances indicated by loss of weight, and no paralysis." He suggested the possibility of using similar neutral mixtures for inducing an active immunity in human subjects, and pointed out the advantage which would follow substituting for a transient passive immunity in exposed children, an active immunity extending over a considerable period.

In 1909 Smith² reported further studies on active immunity against diphtheria by neutral mixtures of toxin and antitoxin. He demonstrated that "active immunity lasting several years can be produced in guinea pigs by the in-

jection of toxin-antitoxin mixtures which have no recognizable harmful effect either immediate or remote." He also found that mixtures which contained an excess of toxin produced a much higher degree of immunity than neutral mixtures, but that too great an excess of antitoxin reduced the possibility of producing active immunity. Although most of the preliminary work was done by an American, it remained again for Behring³ to adapt the process to man, which he did, after extensive studies on animals, in 1913. Several favorable reports of the use of Behring's vaccine appeared in Germany in 1913, and have been admirably abstracted by Veeder.⁴

In 1916, Park and Zingher⁵ reported results of their use of toxin-antitoxin mixtures, and expressed the hope that there would be aroused an interest in the more widespread use of an active immunization with mixtures of diphtheria toxin and antitoxin which will enable us to greatly lessen and perhaps finally eradicate diphtheria. From then to the present the use of toxin-antitoxin mixtures to produce immunity against diphtheria has been actively studied by Park, Zingher and others in the Department of Health of the City of New York. It was fortunate that these studies were undertaken in New York City, where an efficient and reliable research laboratory which had long been actively engaged in the study of diphtheria problems was available. The results are very valuable, especially as they have been controlled by carefully made Schick tests. The reports made this summer before the New York Academy of Medicine⁶ and the American Medical Association⁷ bear the marks of a carefully conducted laboratory experiment. During the last four months of the school year of 1920-1921, 52,000 children in 44 schools were given Schick tests. Those who gave positive reactions varied from 67 to 16 per cent. To those reacting positively, toxin-antitoxin was given.

A retest of the injected individuals in one school in which three injections had been given, showed that 87.5 per cent. had become negative after three months. In four schools after 2.5 months, from 76.1 to 35.2 per cent. had become negative. These tests were made before the immunizing process was complete, and after a few weeks more the proportions would be much increased.

Schroeder⁸ reported the results of some of the

earlier work done in the New York Department of Health. He had recently retested 570 school children who had been immunized during the past two years. Among these 90 to 95 per cent. had become immune. Of 28 children with positive Schick reaction, after toxin-antitoxin was given, 22 became negative within four months and remained so five years, 25 became negative within six months and remained so 4½ years. The two remaining ones became negative after additional injections. In several institutions in which the children could be followed over a considerable period, those giving a positive Schick were given toxin-antitoxin mixture. After from 1 to 5 years the proportion of immune children varied from 71.5 to 100 per cent. In most groups within this period the immunes were between 93 and 100 per cent. Schroeder concludes: "Over 28,000 cases of diphtheria occurred in New York City during the years 1919-1920 and of the 2,284 persons who died, over 90 per cent. were children and at least 90 per cent. of these cases of sickness and death could probably have been prevented by means of the Schick test and immunization with diphtheria toxin-antitoxin."

Byard⁹ has employed the Schick test and immunization with toxin-antitoxin in private practice. Of 192 families, 163 or 85 per cent. accepted the program in whole or part. Of 338 children only 21 or 2.1 per cent. were naturally immune. The toxin-antitoxin injections were made in 317 children, and of these only 7, or 2.4 per cent., were not immune eight months later. Of 79 children between 2 and 9 years all were immune after eight months. This shows that the process can be successfully carried out in private practice. When we remember that about 38 per cent. of the cases of diphtheria in Chicago occur in children under school age, and that about 65 per cent. of the deaths from diphtheria occur during that period, the part which the family doctor must play in the successful use of this immunizing process is very apparent. It is during this early period of life that protection from diphtheria is most needed, and during this time the injection of toxin-antitoxin is followed by slight disturbances. Children should not be injected until they are 6 months old, but as early after reaching 1 year as possible. The preliminary Schick test may be omitted in these children. Thorough immunization during the pre-

school period would largely remove the necessity of work among school children. Statistics collected by the Chicago Department of Health¹⁰ show that over 40 per cent. of the cases of diphtheria occur among children of school age, and that of deaths from diphtheria, about 29 per cent. occur during this age period. The importance of an immunity during the school period is very apparent. Since in children above 5 years the number who are naturally immune increases as does also the frequency of more severe reactions after the injection of toxin-antitoxin, it is desirable in them to use a preliminary Schick test. Those only who give a positive reaction need be given the toxin-antitoxin injections.

The duration of the active immunity called forth by injections of toxin-antitoxin has not been finally determined because sufficient time has not passed. It is known that it usually lasts over 5 years, and probably much longer. If all children could be immunized before a year old, we might reasonably expect such a reduction in the occurrence of diphtheria that it would soon be as rare as smallpox is as a result of general vaccination. At first all school children must be reached, not only those entering, but those of higher grades.

Because of more severe reactions from the injections, and because of the relative infrequency of diphtheria in adults, it has not been advisable to extend its use generally among these persons. In the case, however, of nurses, internes and other young persons who are specially exposed to infection, protection through toxin-antitoxin is to be advised.

Mulso¹¹ has reported the results secured in Durand Hospital through the use of the injection in nurses giving positive Schick reactions. Although the process of immunization was interfered with by associated injections of antitoxin, 24 out of 31 nurses within 3 months after injection were rendered immune, probably for many years.

It must be stated that the injection of toxin-antitoxin has no bearing on the treatment of diphtheria. In the presence of diphtheria we must still insist upon the prompt administration of adequate doses of antitoxin. Where immediate immunity is demanded because of contact with the disease in families of children or in institutions antitoxin must still be used, as im-

munity from the toxin-antitoxin only appears after an interval of several weeks or months.

In many cities public health officials are actively interested in the use of toxin-antitoxin immunization, and the solutions for making Schick tests and the mixtures for immunization are offered to physicians. They are also for sale by firms who manufacture biological preparations. The technique of the tests is simple and the entire procedure is readily carried out by the family doctor. The education of the people regarding this matter rests largely with the medical advisers of the families, and they have an opportunity of performing a valuable service to the children who are dependent on them for care and advice. This method of producing immunity to diphtheria has now passed the experimental stage, and children have the right to receive the benefit which it confers.

In no instance does the injection of properly prepared toxin-antitoxin appear to have produced more than temporary disturbance, although, especially in adults, the reaction may be rather severe. In this it resembles the results which follow administration of typhoid vaccine.

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THE RELATION THAT EXISTS BETWEEN HYPERTENSION, MYOCARDITIS AND NEPHRITIS*

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Analysis and synthesis are methods by which we seek to obtain knowledge of unknown substances, processes and conditions. In internal medicine we use analysis to subdivide and classify cases representing a general group, and so try to obtain a more complete knowledge of the condition. As an example, we subdivide pulmonary tuberculosis into miliary tuberculosis, tuberculous pneumonia, tuberculosis with cavity formation, etc., and recognize that these different

varieties have a different prognosis, should receive different therapeutic management, have different physical signs, etc. In such a method of study we emphasize differences and use differences as a basis of classification or grouping. By contrast in synthesis we dwell on similarities and by using similarities we bring together smaller groups into larger groups. To return to tuberculosis, we recognize that all forms have a common etiology, the tubercle bacillus, that the anatomical differences depend on the number of tubercle bacilli and how they make their entrance, on the tissue infected and the degree of resistance in the patient; that we are dealing with a single disease, tuberculosis, which in its relation to the general public is much the same whatever the type in the individual.

Both analysis and synthesis contribute to our advance in knowledge of disease. The method of analysis perhaps is more often used in medicine and as a result we discuss classifications of all sorts of diseases and conditions. By so doing we learn much, but on the whole we increase the complexity of medicine and sometimes we do this without advancing greatly our actual knowledge of the subject. On the other hand, synthesis, when it is possible, tends to simplify our conceptions. Both processes undoubtedly need to be used in studying disease, analysis with its subdividing up to a certain point, then synthesis, putting together our knowledge with broader concepts.

Today I am going to discuss that group of patients who, broadly, we term cardio-renal from the viewpoint of synthesis, dwelling on similarities rather than differences, attempting to see what common ground there may be in patients who present themselves as suffering in the main from hypertension or from myocarditis or from nephritis. In doing this, one naturally considers what relations there may exist between hypertension, myocarditis and nephritis.

The motto of your society is an equilateral triangle with the name of one of the states on each side of this triangle. Without knowing its real origin, I assume that this motto means the union of the medical strengths or interests of these states, each state being of equal importance in the organization, but each dependent on or bound to the other two so as to gain strength and solidarity by the union. To express a somewhat similar relationship, I will use your tri-

*Read before the Tri-State District Medical Association, at Milwaukee, Nov. 17, 1921.

angle and instead of Iowa, Illinois and Wisconsin, I will substitute hypertension, myocarditis and nephritis. This arrangement indicates that these terms have an individual independence like states but also an interdependence through which this triad forms an important expression of the general relationships of significant morbid processes in the human economy. It is chiefly about this latter aspect, interdependence, that I will speak.

If you will pass over in your mind recent patients in whom you have made the diagnosis hypertension, or myocarditis, or nephritis and recall the findings in different ones of them, you will recognize that sometimes there were abnormalities which seemed to justify the diagnosis of but one of this triad, at other times two or even three of them. That is, there were some cases in which you could demonstrate only a high blood pressure without evidence of cardiac or renal damage, while there were other cases in which without a high blood pressure or abnormal renal lesion the heart was enlarged and improperly functioned. In yet another group there were normal blood pressure and a properly functioning heart muscle, but poor renal function. Much more commonly the findings indicative of one of these groups were combined with those of another or there was a combination of all three. Then, if you will think of the progression of events in any one of these cases, you will recall that in some at first there was hypertension, that later the heart enlarged, that somewhat later poor renal function appeared and, finally, a decompensated heart was combined with a picture of uremia. In other cases, a combination of two but not of all three conditions appeared. The occurrence of these combinations suggests a close interdependence of these processes in their cause and their progression.

Let us first consider hypertension. The prevailing view at present is that hypertension is dependent upon changes in the small arteries, the arterioles, scattered throughout the body, and that, while it is often combined with the condition in the larger arteries, which we term arteriosclerosis, it is not caused by such arteriosclerosis. Without question we find hypertension in patients in whom there is no demonstrable arteriosclerosis and arteriosclerosis of marked degree occurs with normal blood pressure. Sir

Clifford Allbutt early recognized this independence and considered arteriosclerosis a degenerative or descrescent process quite apart from hypertension, or, as he called it, hyperpiesis. It is well to bear in mind that in a clinical sense arteriosclerosis is usually used as a term to indicate that the larger arteries show thickening of their walls, tortuosity and calcification in varying combinations and that hypertension or hyperpiesis means a persisting high blood pressure. It is incorrect to infer that, because there is arteriosclerosis in this clinical sense, the blood pressure is high, and equally incorrect to think that hypertension is not present because the palpating finger detects no changes in the arterial wall. As a matter of fact, very often arteriosclerosis in this clinical sense and hypertension coexist, but the former does not cause the latter. Very often these mistakes are made in discussing patients with arterial disease.

Granting that the immediate cause of hypertension lies in the arterioles, i. e., is due to an increased peripheral resistance from narrowing of the peripheral vascular bed at the level of the arterioles, what changes, if any, will be found in the arteriole? Either spasm of the vessel wall or an organic change in the wall causing a narrowing of the lumen or interfering with the dilatation of the vessel will result in an increased blood pressure if these changes are very general in the body. If there is spasm alone, the microscope will reveal no change in the body tissues. If there is an organic lesion, the microscope will show thickening and degeneration of the wall of the arterioles. It is believed that in earlier stages of the process often there is only spasm while later there are organic changes; what you find under the microscope depends on this.

What is the cause of these changes in the arterioles? By many it is stated that nephritis is the cause of hypertension and that consequently finding a high blood pressure justifies the diagnosis of nephritis even though there is no other evidence of renal disturbance. We now know that very often we find hypertension in patients in whom renal function, tested by any method, is practically normal and that in hypertensive cases autopsy in some instances shows only minimal lesions in the kidney. In other words, we have evidence that nephritis is not a constant cause of hypertension. Whether

nephritis ever causes hypertension will be discussed later.

Another cause for hypertension, rather recently adduced, is that it results from a disturbed salt metabolism and can be satisfactorily treated by eliminating salt from the diet. Our studies at the Peter Bent Brigham Hospital have not supported this view. This is not to say that in some cases of hypertension we do not find poor salt elimination. This has been long recognized, but it is our belief, based on our own observations, that salt retention is dependent on a disturbed renal function and an accompaniment of some cases of hypertension rather than an important causative factor.

Infection has been adduced as an important cause of hypertension in the sense that it has lead to the vascular lesions. Antecedent infection rather than coincident infection is what is described. Hence, it is not likely that infection would cause spasm but rather organic lesion of the wall of the arterioles. Evidence for this is in the main statistical and is subject to considerable error; it is easy to find a history of infection of some sort in most adults; whether there are more infections or infection of a more severe or more chronic type in cases of hypertension is difficult to decide for any large group of cases. We do know that many infections cause vascular lesions demonstrable under the microscope and these very probably may lead to persisting vascular changes causing hypertension. Anyhow, there is a growing belief that infection plays a large part in causing hypertension. Curiously enough, however, syphilis, which we know to produce some striking vascular lesions, such as aortitis and aneurysm, and in whose lesions of all sorts periarteritis is prominent, seems to play but a small part in hypertension; the proportion of patients with hypertension who have positive Wassermann reactions is relatively very small and antisyphilitic treatment rarely benefits hypertension.

Some endocrine disturbances are associated with hypertension, but that such a cause is at all general seems very improbable. I might discuss other assigned causes in a similar way. What I want to emphasize, however, is that today we know of no one final cause of hypertension; a number of factors play a part and perhaps there are a variety of causes. Hypertension very likely is, in a sense, of the nature

of a symptom and not a disease, an expression of a disturbance that, like fever, might have many causes. As to the mechanism, it seems pretty certain that it is caused by a disturbance in the small blood vessels, arterioles and smaller, of the body.

Now let us turn to nephritis and consider it somewhat as we have discussed hypertension. For nephritis we have better knowledge of the organic lesion than we have for hypertension, for we find in practically every case some demonstrable lesion in the kidney. However, as in hypertension, the degree of functional disturbance often is quite out of proportion to the demonstrable organic lesion. In nephritis the relative relation of vascular to epithelial lesion is not fully understood. There is a considerable body of evidence that in a large group of nephritides the vascular lesion is the primary and the most important disturbance, while the changes in the epithelial structures are secondary to the vascular lesions. This applies particularly to that large group of renal patients that we ordinarily speak of as having chronic interstitial nephritis. Moreover, there is a growing feeling that the eye changes, commonly spoken of as albuminuric retinitis, which are so common in this type of nephritis, are in essential vascular lesions of local origin, bearing only an indirect relation to the renal lesion and having no relation to uremia. If this is true not only is this type of nephritis in large part a vascular lesion, but also it is one expression of a general process involving other vascular territories than those within the kidney.

I have already spoken of the possible relationship between hypertension and nephritis and stated that nephritis does not bear a constant causal relation to hypertension, but that hypertension may be found without evidence of nephritis. Certain types of nephritis are not accompanied by high blood pressure, while with other types we have hypertension. In some cases we have recorded observations of hypertension prior to evidences of nephritis and later see the picture of nephritis develop. In other cases we have no positive evidence of hypertension prior to the development of symptoms and signs of nephritis and in certain of our cases of acute nephritis we observe the blood pressure to rise as the nephritis progresses. So I am inclined to think that at times high blood pressure is

caused by nephritis, but it is not possible to say how often this is true in chronic nephritis, and we do not know just how the hypertension is brought about. It is also true that the vascular lesions causing hypertension may in the kidney cause the clinical picture of nephritis, perhaps indirectly actually cause nephritis.

Disturbed salt metabolism is often present in nephritis, but that it is a direct cause does not seem very probable. On the other hand, almost all students of the renal problem believe that infection is a very important causative factor in nephritis. Here, as with hypertension, direct evidence is often lacking, but the frequent observation of an infection just prior to the development of an acute nephritis is very suggestive so far as acute nephritis is concerned. With nephritis, as with hypertension, syphilis appears to play only a very minor role.

It is recognized that certain of the endocrine disturbances affect renal function, but there is little evidence that any such disturbances cause nephritis. You see, as with hypertension; nephritis perhaps has a variety of causes not all of which, by any means, have I attempted to discuss. What I wish to emphasize is that there is observational evidence that in some patients hypertension bears some, even though an indirect, causal relation to nephritis and that both in hypertension and in some types of nephritis a lesion of small blood vessels is an important part of the causative mechanism of the processes.

If now we treat myocarditis from the same viewpoint, we find much in common with the conditions which I have just discussed for hypertension and nephritis. Perhaps it is necessary at this juncture to define my use of the term myocarditis. I mean by myocarditis a disturbance in the heart muscle, which leads to cardiac insufficiency, a type of heart which is usually enlarged but in which the valves are structurally normal. There is no constant finding as to type of irregularity, though sooner or later in the majority auricular fibrillation develops; however, some cases never develop arrhythmia. Under the microscope the heart muscle may appear surprisingly normal and changes in the interstitial tissue may be very slight or even absent.

For the cases of myocarditis I think we know less in regard to the lesion than we do for either hypertension or nephritis, certainly far less than for nephritis. That the disturbance in the heart

muscle is primarily referable to the small arteries is an attractive hypothesis, fitting many of the associated phenomena but of which unfortunately we have little positive evidence. Coronary sclerosis is often present, but is very far from a constant finding.

The association of chronic myocarditis with hypertension is interesting. Very often we have the opportunity to observe a patient with a high blood pressure whose heart, so far as we can judge, functions normally and we cannot demonstrate any real enlargement. A little later in the same patient we find the heart enlarged. Still later, there is breathlessness and finally cardiac decompensation with all of the findings that lead us to make the diagnosis of chronic myocarditis. High blood pressure has persisted throughout. What is its relationship to the myocarditis? It is simple to say continued work against abnormal pressure has led to the cardiac disturbance, but is it so? Most observers are rather unwilling to say that a true work hypertrophy with subsequent decompensation of the heart can occur. It seems more probable that some common cause has led to hypertension and to the cardiac lesion and that cardiac enlargement is but a phase in the progression of the lesion.

In contrast to such a patient we see patients with identical cardiac findings but with normal blood pressure. Some observers intimate that here hypertension has antedated cardiac decompensation and cardiac decompensation, at the time the patient is first observed, has caused a previously high pressure to fall to normal. It seems to me that the evidence for such a belief is insufficient and that such a sequence for most cases is more improbable than probable. To my way of thinking, just the same cardiac lesion may develop either with or without hypertension. However, this is not to deny that there may not be a vascular lesion at the bottom of each type of myocardial lesion; to have hypertension the vascular lesion must be quite general and not merely localized in one or several organs. We can say that, if it is general, we have hypertension; if it is localized in the heart, we have chronic myocarditis; if it is both general and localized in the heart, we have hypertension and chronic myocarditis.

The role of infection in causing myocarditis stands as unproved. There is considerable evidence in its favor but relatively little direct

proof. Still we do observe a typical chronic myocarditis develop as a sequence of such acute infections as pneumonia often enough to give support to the view that infection plays an important role. On an inferential basis, as for nephritis and hypertension, we are justified in the hypothesis that infection may be an important factor in causing changes in the heart muscle that result in that form of cardiac insufficiency which we term chronic myocarditis. As for hypertension and nephritis, syphilis seems to play a minor role; as in the other two conditions our findings at the Peter Bent Brigham Hospital of positive Wassermann reactions or other evidence of syphilis in these cases of chronic myocarditis are relatively infrequent.

As to endocrine disturbances, we know that a continued hyperthyroidism often leads to a cardiac disturbance of the nature of chronic myocarditis; yet it seems improbable to me that it is the cause of any large proportion of cases of chronic myocarditis. Certainly in Boston we fail to find evidences of antecedent or coincident hyperthyroidism in these cases and similarly evidence of other endocrine disturbances are very infrequent.

I have attempted to show that, so far as we know, very similar causative factors are operative in the production of hypertension, nephritis and myocarditis even though we can but rarely say for a given case that the cause has been a definite one. Furthermore, we have either direct evidence, good inferential reasons or well supported hypothesis, for believing that in all three conditions disturbance in the small arteries constitutes an important part of the lesion. All three conditions occur with far greatest frequency at middle life or later, though all may be observed occasionally in the young.

The similarities which I have brought out justify us in grouping hypertension, nephritis and myocarditis together. We are not justified in claiming that there is any constant sequence in these processes or that in any given case at any period of time all three will be present. In fact, we have to recognize that we see patients with nephritis without hypertension and without myocarditis and myocarditis cases without hypertension and with only such renal disturbance as is the result of chronic passive congestion. These findings, however, do not preclude

a common lesion with different manifestations dependent on what viscera are extensively involved. Also, they do not prove that in all three the same general processes, namely, vascular disturbances, are operative. I think we can state that if a hypertension develops and persists, sooner or later we will be able to demonstrate changes in the larger vessels, i. e., arteriosclerosis in a clinical sense, that the heart will hypertrophy and become insufficient, i. e., chronic myocarditis will ensue and that renal insufficiency will appear, i. e., chronic nephritis will develop. In some cases, this actual sequence will take place; in other cases, the sequence will be different but the end stage the same. Finally, the progression may be stopped by death at almost any stage and so the end result in any given case may be hypertension with arteriosclerosis and little else or with these there may be chronic myocarditis but no real nephritis or chronic nephritis without any actual cardiac insufficiency. In a pathological sense there may be lesions very marked in arteries, heart and kidneys or much more marked in one than in the others.

I believe that there is much evidence for a very close relationship between what we clinically term hypertension, myocarditis and nephritis and that a better understanding of these processes is obtained by considering their resemblances rather than their differences, whether we are studying their causes, their manifestations or their management. In other words, synthesis is more helpful at the present stage of our knowledge than analysis in considering hypertension, nephritis and myocarditis.

PRESIDENT HARDING TAKEN TO TASK FOR HIS ATTITUDE ON THE SHEPPARD-TOWNER MATERNITY BILL

MARY G. KILBRETH
WASHINGTON, D. C.

Washington, Nov. 26.—A protest to President Harding against executive encroachments involved in the passage of the so-called "Maternity Bill," contending that they violate the Republican platform promise "to end executive autocracy" and the President's own campaign pledge to restore "party government as distinguished from personal government," was made public here today by the National Association

Opposed to Woman Suffrage, which, in cooperation with a number of medical societies, civic federations and medical liberty organizations, has been opposing the Maternity Bill.

The protest is signed by Miss Mary G. Kilbreth, president of the National Association Opposed to Woman Suffrage, who asserts that if the President was pledged to maternity legislation, the amendment introduced by Senator Moses, Republican, providing for maternity hospitals and nursing schools under local control, should have had the President's support rather than the bill which passed, that "actually prohibits the use of any part of the funds for maternity hospitals or equipment and does not provide a bed for any mother or a bottle for any baby in the land." Miss Kilbreth declares that the Moses amendment, though backed by physicians, "did not receive ten minutes' consideration in either committee or in either House" after it was objected to before the Senate Committee on Education and Labor by the President of the Inter-Collegiate Socialist League.

The text follows:

Washington, Nov. 25, 1921.

His Excellency,
The President of the United States,
The White House, Washington, D. C.
Sir:

It is asserted that the Sheppard-Towner Maternity Bill, in spite of growing opposition throughout the country on the part of medical societies, civic federations, distinguished physicians and other citizens, was passed by the Congress in deference to the expressed wishes of the Chief Executive.

This assertion, though made by members of Congress, would seem incredible, in view of the following commitments:

1. The Republican Platform solemnly affirms:

"We undertake to end executive autocracy and to restore to the people their constitutional government."

2. Your Excellency, in the Acceptance Speech, declared:

"Let it be understood clearly from the very beginning, I believe in party sponsorship in government, as distinguished from personal government, individual, dictatorial, autocratic or whatnot. . . . Republics have risen and fallen and transition from party to personal government has preceded

every failure since the world began. Under the Constitution we have the chartered way to security and perpetuity. . . . Our first committal is the restoration of representative, popular government, under the Constitution, through the agency of the Republican party. . . . Neither government nor party can afford to cheat the American people."

3. The Republican Platform makers *rejected* so-called maternity legislation, although reported by the Sub-Committee on Social Problems. (Reports of Sub-Committees, pages 161-166.)

The Democratic Platform indorsed it. In nothing were the platforms more diametrically opposed than in regard to the so-called woman's legislative program, of which this bill is the first demand. The issue between the platforms on this measure was so clear that Senator Thomas, Democrat, of Colorado, speaking against the Sheppard-Towner Bill on the floor of the Senate, said:

"If it (the election) means anything now, it means, 'Beat this bill.'" (Dec. 16, 1920, Congressional Record, p. 427.)

4. The Constitution vests all legislative power in Congress. (Article I, Sec. 1.)

Surely the framers of Article II, Sec. 3, providing that the President "shall from time to time give to the Congress information of the state of the Union, and recommend to their consideration such measures as he shall judge necessary and expedient," did not contemplate under that cautious grant of power active participation by the Chief Executive in hotly contested legislation.

"When the legislative and executive power are united in the same person . . . there can be no liberty." (Story on the Constitution, quoting Montesquieu's Spirit of Laws.)

Without the independence of the legislative power, the whole system of checks and balances peculiar to our experiment in government "of the people, by the people, for the people" must perish. We cannot surrender this vital and fundamental safeguard of our liberty without solemn protest.

If the allegations of Executive pressure are without foundation, we trust that Your Excellency will repudiate them and thus allay public alarm at executive encroachments. For, were

these allegations true, the Constitution would be violated, and the Republican election-contract with the voters broken, nullifying the power of the ballot and destroying representative government.

Your Excellency's dual constitutional and political responsibility (as Chief Executive to uphold and defend the Constitution, and as chief of the Republican party, to carry out the pledges of the platform and the purposes of the voters in electing a Republican Administration) is very great.

A party platform is a contract with the people. If it is not binding after indorsement by the voters at the polls, a convention is a farce, a platform a fraud, an election a sham, and the ballot worthless. If party and candidates reverse themselves after election on the great official pre-election commitments, direct or implied, they have played a confidence game with the people. The people's sovereignty, the validity of representative government, is at stake.

The people voted on the platform. On the strength of the Republican Platform they put Republicans in complete control of National and State legislation. It is clear from the 7,000,000 Republican majority that the people voted on certain great issues on which the platforms differed that far transcended party lines.

The executive encroachments of the preceding administration were one of the chief causes of its repudiation at the polls.

But these encroachments were committed under the temporary war power delegated to the Executive by Congress, and therefore did not establish a precedent. That power no longer exists.

Continued executive encroachments now, on the contrary, would *establish personal* as distinguished from *constitutional* and *party* government.

We respectfully contend that a return to normalcy and a peace-time basis requires that the Chief Executive divest himself promptly of temporary war power and return to the constitutional limitations of his office, no less than it requires that soldiers lay aside their arms and obey the civil law.

The Republican Platform promised:

"The policies herein declared will be carried out by the Federal and State governments, *each acting within its constitutional powers.*"

But once out of the hands of the platform

makers, the policies are in the keeping of the party candidates and leaders. The platform is at their mercy.

Nevertheless, in one short month after election, the Sheppard-Towner Bill was swept through the Senate without a roll call, the majority leaders concurring.

On February 17, 1921, the Chairman of the Republican Congressional Committee, speaking at the convention of the National Woman's party, assured the delegates:

"The women's program for legislation will have the support of the Republican party."

In Your Excellency's first message to Congress, you wrote:

"I assume the Maternity Bill . . . will be enacted promptly."

On July 22, the Maternity Bill was again forced through the Senate, only three Republicans voting "No."

One of the most sinister aspects of the Feminist drive for the Maternity Bill was the statement by Mrs. Harriet Taylor Upton, vice-chairman of the National Republican Committee, at the final hearing before the House Interstate and Foreign Commerce Committee:

"I know exactly what the committee and Congress are going to do about this." (House hearing, July, 1921, page 284.)

Notwithstanding the increasing volume of popular opposition, the bill was reported out by the committee and has been rushed through the House by adroit parliamentary tactics, confining control of the debate exclusively to advocates of the bill, and denying a representative opposed to the bill even one extra minute which he requested to finish reading the official Census Bureau figures on birth and mortality statistics. (Congressional Record, Nov. 19, p. 8872.)

The bill was finally slipped through the Senate without a roll call, in the middle of a speech.

It is said, sir, in sponsoring the Women's Welfare Program, that you are acting under a pre-election commitment of October 1, 1920, to a delegation of women who presented no concrete legislative bills for your indorsement, but expressed merely idealistic "blanket" aspirations for social and industrial betterment "of special interest to the newly enfranchised voters," as Mrs. Raymond Robins then declared.

To these vague pleadings, Your Excellency replied:

"I pledge myself today to support with all that is in me whatever practical policy of social welfare and social justice can be brought forward by the combined wisdom of all Americans."

Is it possible that this mere expression of humanitarian good will to a delegation of women outweighs Your Excellency's official commitment to the American people in the Acceptance Speech, to restore "party sponsorship in government as distinguished from personal government"?

Mr. President, we respectfully remind you that the Sheppard-Towner Bill was not sponsored by the Republican party, but by the Democratic party. It was not "brought forward by the combined wisdom of all Americans," but by the propaganda of a self-interested bureau associated with the Feminist Bloc. There are many loyal American men and women who believe that this bill, inspired by foreign experiments in Communism, and backed by all the radical forces in the country, strikes at the heart of our American civilization, invading the sanctity of our homes and undermining our individualism and sturdy self-reliance.

Your Excellency appears to have recognized certain of these dangers, for you warned the welfare delegation:

"We must avoid paternalism . . . because a paternalistic social welfare program would smother some of the liberties, some of the dignity, and some of the freedom of self-expression of our individuals. . . . There is grave danger at hand when centralized expression begins to take from local communities all the burdens of social conscience. The best that humanity knows comes up from the individual man and woman through the sacred institutions of the family and the home."

If Your Excellency was pledged to maternity legislation, should not the amendment introduced by Senator Moses, Republican, providing maternity hospitals and nursing schools under local control, have received your support rather than the Sheppard-Towner bill, which actually *prohibits* the use of any part of the funds for maternity hospitals or equipment (Sec. 12), and does not provide a bed for any mother or a bottle for any baby in the land?

Nevertheless, the Moses amendment, with its practical provisions, indorsed by physicians, was contemptuously swept aside in the Senate Com-

mittee on Education and Labor, after the objection of Mrs. Florence Kelley, president of the Inter-Collegiate Socialist League, and *did not receive ten minutes' consideration in either committee or in either House* after the objection by this powerful Socialist.

Mr. President, the bill as altered in the House committee was presented with most adroit, dexterous chicanery and sophistry by the chairman of the committee. The changes were textual, not actual. Representative Mapes, proponent of the bill, said truthfully:

"I do not think the bill as reported by the committee has been changed materially. The amendments have made it possible for some people to support the bill who were originally against it. It pleases them and hurts nobody. . . . The two principal things, in my opinion, are the *appropriations* and placing the authority to administer the work in the Children's Bureau." (Congressional Record, Nov. 19, p. 8864.)

While the testimony and documentary evidence of invasion of the home, inspection of husbands' wages, payrolls, etc., by the Children's Bureau, led to a gesture by the committee in depreciation of such invasions, the committee was careful to place *no penalty or enforcement clause* against such invasions, so that they may be *continued* by these agents and investigators in the same manner that the original provision in the law establishing the Children's Bureau, and the Fourth Amendment to the Constitution, are being constantly violated.

We predict, Mr. President, when the homeless and childless political "advisers and investigators" begin swarming into the homes of the rank and file of American citizens (butlers and footmen will guard the homes of the rich) to inspect mothers and investigate fathers, and "instruct" American housewives how to keep house and American mothers how to bear and rear children, there will be two resentful citizens—a father and a mother—in many American homes. The greater the loyalty of a citizen to our institutions, the greater will be his or her resentment to the Sheppard-Towner Bill.

The people are not yet alive to this measure. We hear on all sides intelligent citizens, including doctors and newspaper editors in New York, saying they had never heard of the Sheppard-Towner Bill and expressing indignation when

they learn its provisions. They believed they had voted down all such bureaucratic, autocratic legislation by electing a Republican administration.

Harassed with taxation and readjustments, they have gone about their business believing they were safe from further Washington interference. If the people resented interference in their business by the last administration, how much more will they resent interference in their domestic lives when they awake to what has been done and they understand that they have been betrayed. We believe more people voted the Republican ticket to "escape Washington" than to escape the League of Nations.

We are confronted with the amazing condition of a Republican administration enacting the Feminist-Socialist legislative program (which is dragging England down to the verge of national bankruptcy) after it was *rejected* by the Republican platform, and by the voters at the polls, and placed in the Democratic platform only in futile and unsuccessful appeal for woman's votes.

Finally, Mr. President, we remind you that the tremendous election mandate of 1920 was from women as well as men, and that no issue between the conventions or the platforms was more sharply drawn than that of Feminism.

I have the honor to be, sir,

Most respectfully yours, *

(Signed) MARY G. KILBRETH,

President, National Association Opposed to Woman Suffrage.

THE INFLUENCE OF THE SEX GLANDS ON INDIVIDUAL GROWTH AND MENTALITY

The sex glands have, it is claimed by Davidson (*Col. State Jour. of Med.*, June, 1921), the most profound influence on the individual growth and mentality. Puberty marks the beginning of their activity in which the skin shares. When this is excessive and the basic conditions are favorable, acne is the result. With the climacteric, the functions acquired at puberty are gradually lost and the whole of the bodily structures begin to decay. With the advent of the climacteric there comes a loss of virility. Man returns again to the asexual conditions of childhood and effeminacy that denotes his evolutionary origin. The male is only a recent evolution, a secondary, and in the lower organisms an unnecessary factor. The Bible story of the creation is not physiologically correct, the woman must have supplied the rib. The climacteric in woman comes about the age of forty-five, and with man about sixty-two. The retiring age of employees in the civil serv-

ice is sixty-five, a good physiologic choice with man, but it, on natural grounds, ought to be forty-eight or fifty for women, for after the climacteric most individuals simply vegetate, the mentality slowly weakens, it is the golden age of Eddyism. With some senility is long deferred, and the individual who retains his virility retains his mentality. One cannot have failed to observe that the men famous in history were not always renowned for their chastity, while almost the only famous women have been the infamous. The phallic worship of the ancients was but a tribute to glandular efficiency. That they worshipped the phallus as an emblem of the mysterious source of life was probably a secondary thought. The primal instinct, when man survived by physical prowess, was the worship of efficiency, and this he knew rose and fell with the functional activity of the sex glands. Lydston, by his operation of gland implantation, has proved the truth of this, but his method for rejuvenation is likely to be superseded by that of Steinach.

While the endocrine glands all seem to support each other in the regulation of the vital forces, there are some, such as the ovaries and the thyroid that mutually inhibit each other. This is the more probable in view of the fact that all life processes are regulated by stimulation and inhibition, for without these counteracting forces life would not appear possible. I think it is necessary to remind you that life, even long life, is possible without the possession of the sex glands, and that this system must be considered as an accessory engine in the train of life, and as such it must contain in its endocrine functions both stimulating and inhibitory hormones. On this account it will be found that the ovary and Graafian vesicles are inhibitory one to the other, and this action regulates the menstrual functions and prevents the irregular and promiscuous discharge of ova.

ALIMENTARY GLYCOSURIA AS AN EARLY DIAGNOSIS OF PREGNANCY

Frank and Northmann (*Muenchner med. Wochenschrift* No. 50, 1920.)

The bladder is first emptied by catheterization and then in the morning the patient drinks 100 grammes of sugar dissolved in 350 to 500 grammes of weak tea. In about an hour the urine is tested for sugar and if there has been no previous glycosuria or increased sugar content of the blood, the presence of sugar in the urine is strongly indicative of pregnancy. In 30 cases of pregnancy, alimentary glycosuria resulted in every case during the first three months of pregnancy. In several cases the diagnosis of pregnancy could not be made by expert gynecologists. The authors think that possibly alimentary glycosuria might be provoked almost at once after the failure of menstruation to appear. Two cases of suspected extrauterine pregnancy were especially interesting. In the one with a positive alimentary glycosuria, the operation showed a tubal pregnancy; in the second with negative results, there were bilateral cysts.

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DECEMBER, 1921

Editorial

THE SHEPPARD-TOWNER BILL AS AMENDED IS AS BAD AS THE ORIGINAL

The Sheppard-Towner Bill is now a law. Before being enacted several amendments were incorporated. These amendments were of course due to the terrific opposition to the bill that finally developed. These changes were as follows:

"Instead of being an open proposition, the Committee has indicated the purpose of making an arrangement for not over five years, unless continued by Act of Congress hereafter. Instead of giving the states \$10,000 flat, it gives \$10,000 for first year only, or at that rate for any portion of first year, and a \$5,000 gratuity for each succeeding year of the 5-year period.

"In addition it authorizes appropriations not exceeding one million a year, out of which 5 per cent goes for administration. Then \$5,000 is apportioned to each state and the remaining part of the one million is divided among the several states on basis of population.

"Whatever part of the one million is appor-

tioned to a state becomes available only when matched, dollar for dollar, by the several states. A Board is created, consisting of the Chief of the Children's Bureau, the Surgeon General and the Commissioner of Education, which shall elect its own chairman.

"The policy of the Children's Bureau in respect to passing on the proposed plans of the various states for action must be approved by the Board and likewise the amount of money allotted to each state must be passed on by the Board.

"Neither state nor Federal officers or agents shall enter any home against the wishes of parent, guardian or person *in loco parentis*.

"The purpose of the Act now reads as follows: 'For the promotion of the welfare and hygiene of maternity and infancy and other purposes.'

"The only power given to the Children's Bureau, save under the direction of the Board, shall be to make studies, investigations and reports such as will promote the efficient administration of the Act.

"Each state submits its own plans to the Board; if approved, the money goes forward. Nothing in the Act shall be construed to determine what treatment or correction shall be given

to any child, nor determine the agency or agencies for such treatment or correction. This is to prevent discriminations in favor of any one school of medicine.

The concessions indicated by Chairman Winslow are obviously those forced by public criticism of the Bill. While they seek to prevent certain abuses in administration and the inauguration of cash benefits, etc., they by no means meet the fundamental objections to the Bill, as will be demonstrated.

1st: The states must still adopt such child welfare plans as the Federal authority may approve. The substitution of a Federal Board of three Federal officers for the Chief of the Children's Bureau does not in any way alter the fact that the Central Government will control—through the most sinister and abused of all controlling powers—the power to give or withhold money—the administrations of state agencies over which Congress has no legal control under the Constitution. In other words, the states are to be bribed to give a Federal Board control over a subject they have refused to give to Congress itself in the Constitution.

"We will give you so much money to let a Federal Board say what your state agency shall do, in spite of the fact that under Amendments IX and X the Federal Government has no legal right to say what your state agency shall do." This is the bald proposition, whether one Federal officer or 10,000 O. K. the allotments and plans.

2nd: Nothing material is given to needy mothers or children. No Maternity Hospital can be built anywhere with any part of the funds. A physician attending a destitute mother could not use 5 cents of the fund for medicine. Not a bed for a single mother or a bottle for a single baby is provided. The entire fund goes for administration, "investigations, reports and gratuities" to states which agree to let a Federal Board do what they have never given the Federal Government legal power to do under the Constitution.

3rd: Morally and legally, the Bill is as indefensible as ever. The Federal Government has no more right to collect money from New York, Illinois and Massachusetts and divide it among Montana, Wyoming and New Mexico than it has the right to take money from Jones and give it to Smith. The Federal Government collects

more money from a millionaire than from a laborer for the Federal Government, but it has no more legal or moral right to make New York "divide up" with Mexico than it has the right to make Rockefeller "divide up" with Eugene V. Debs.

4th: So-called "Federal Air" as in this bill is not the same as in the Good Roads Bill. The Constitution gives Congress power over Interstate Commerce, transportation and post roads. With rural delivery, nearly every road is a post road. Likewise the vocational education bill for soldiers is different. The Constitution gives Congress power to "raise and support armies," and the duty of caring for the "Nation's defender, his widow and orphans," as Lincoln said; but the Constitution does not give Congress power to "raise and support children, nor the right to tell states and parents how they shall be reared. The only legal way to get this power is by Federal Amendments. The present proposed plan is morally the same as *corruption and bribery*, whatever jugglery and excuses may be offered.

THE A. M. A. STATE MEDICINE RESOLUTION

The following resolution defining State Medicine was adopted by the House of Delegates of the A. M. A. at the Boston meeting.

Resolved, By the House of Delegates of the American Medical Association, that it approves and endorses all proper activities and policies of State and Federal governments directed to the prevention of disease and the preservation of the public health.

It was prophesied by several at the time that this compromising resolution would sometimes get us into trouble. Sure enough, this prophecy was fulfilled within sixty days after its passage. On July 18, or six weeks after favorable action on it by the A. M. A. House of Delegates, Dr. C. E. Humiston, President of the Illinois State Medical Society, appeared before the Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D. C., in opposition to the notorious Sheppard-Towner Maternity Bill, and a member of said committee used this very resolution for the apparent purpose of showing that the resolution passed by the A. M.

A. defining "State Medicine," in effect approved the purposes of the maternity bill.

We published Dr. Humiston's testimony before the committee in the August issue of the JOURNAL, and anyone who read it could readily appreciate the embarrassing position in which Dr. Humiston was placed in having to apologize for this resolution which to the committee gave the impression directly opposite to what the medical profession desire to stand for.

Unless we miss our guess, there will come before the House of Delegates at the A. M. A. meeting at St. Louis a resolution defining State Medicine that will be bullet proof and that members of the national and local legislative bodies will have no difficulty in interpreting, so far as the viewpoint of the medical profession is concerned.

A. M. A. DELEGATES OUGHT TO GO INSTRUCTED

For the benefit of the large number of State Journals that exchange with us we desire to call attention to the necessity of determining where the delegates to the A. M. A. stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our delegates ought to go instructed.—*Indiana State Medical Journal*, November, 1921.

THE CHICAGO MEDICAL SOCIETY WILL DEFEND

DOCTORS DON'T PAY MORE THAN ONE NARCOTIC LICENSE FEE

In Chicago there has been an attempt on the part of the Internal Revenue Department to demand more than one license for the prescribing of Narcotic. Many doctors have felt coerced into paying a second license. We believe the

ruling is illegal and that it will not be sustained in court.

The injustice of the ruling was called to the attention of the Council of Chicago Medical Society at the October 8th meeting of the Council and after considerable discussion the following motion was adopted:

That the Chicago Medical Society will defend any physician who sees fit to make a test case as to the legality of the ruling of the Internal Revenue Department.

At the November meeting of the Council the matter was again brought up and discussed. The Council further decided that the ruling of the Internal Revenue Department is of more than local importance, that it is a national proposition, and that the Council recommend to the American Medical Association that it take the matter up at once and push it to a successful conclusion.

ANN ARBOR, MICHIGAN, THE BIRTH-PLACE OF HOAXES

Munsey's Magazine for August, 1903, speaking of famous American hoaxes, says that professors at Ann Arbor, Michigan, certified to the genuineness of P. T. Barnum's bogus white elephant.

Attesting to the genuineness of counterfeits evidently has become a habit with Ann Arbor professors. Dr. Hugh Cabot is the most recent recruit to the practice.

His is the lusty white elephant that has flopped himself down on the door steps of the medical fraternity. The name of this brute of Cabot's is the Socialization of Medicine. The elephant pretends to be sent direct from heaven with some of the millennium tied to his trunk.

Instead the Socialization of Medicine is merely another fake sent out by the University of Michigan. Dr. Hugh Cabot, dean of the medical department of this institution, has tied his official O. K. on the pachyderm, given the brute his blessing and speeded him on his way with much the same gusto as several decades ago other professors at this same university attested to the "genuineness" of the "white elephant" shown at that time by the late P. T. Barnum.

The peroxide put on the Barnum fake wore off before the fake or the bleach or any part of the hoax had done any damage to anybody. The trouble with the Cabot swindle is that of neces-

sity its exposure will work the other way around. Only through the harm done to the profession, and in due sequence to the people, will the white-wash be scraped off the iniquities of the Socialization of Medicine. The rank and file of the profession should rub the dust out of its eyes and get a square look at things. It has been well said that the "apathy in the medical profession is pathetic." If it were not so, false leaders like Cabot and Lambert would not flourish nor would an institution like Johns Hopkins University come out flatly and make a rule out of the exception.

Daily papers all over the land quote Dr. Hugh Cabot as saying, "The limitation of the services of the University hospital to the indigent people of the state to my mind is undemocratic. The hospital should be open to rich and poor alike."

On the surface that reads like a neat little altruistic statement—one of selfishness and ardor for the common weal. Scratch the backs of the majority of these fraternal comments from silk-plush bolshevists and you find them masking cheap sovietistic tenets. The majority of the leaders who make such comments are usually ensconced securely in some soft well-cushioned nest provided for them by the moneyed foundations upon which gold-lined bolshevism is built. It is from such centers that the partisanship for State Medicine receives its daily bread and milk.

It is very kind indeed of Dr. Cabot to love the population of the State of Michigan so well that he feels every man, woman and child therein should have gratuitous medical and surgical treatment without stopping to investigate whether the hospital applicant is a pauper or a plutocrat.

Indeed, hospitals of the University of Michigan have gone a long ways towards pauperizing the community in that state. Even some sections of Indiana and Ohio have been able to "get in on the graft."

It had been fine for the bolshevistic elements and for such moneyed men as Dr. Cabot, who could possibly exist without having to practice medicine as a vocation, or who wishing to do so are relieved from financial embarrassment either through a fat inheritance or the assets acquired through a wealthy marriage. Neither a fat inheritance nor a wife with a plump bank account, however, are the possessions of a great many

skilled but comparatively penurious physicians and surgeons.

Indeed this description might apply to some of the doctors who are graduated from the University of Michigan—quite a number of whom pay taxes to the State of Michigan just as do the citizens who can go without expense to the University hospitals. These doctors are going to have a hard time of it to stay in Michigan, earn a living and compete with the hand that taught them all they know. The time, the money, the brains put into learning how to be a physician in the State of Michigan are going to be time and talents wasted unless the state has in waiting a sufficient number of padded jobs for its graduates—be these municipal, state or federal.

What is going to happen if this does maintain? It means that medicine in Michigan is going to be so subsidized by cheap politics that our children and our children's children to the fourth generation will reap the results of this monumental folly on the part of a profession blinded by indifference to its own best interests. Unfortunately, ability is not the ladder by which a man climbs to a government given job.

Free medical and surgical treatment for the worthy poor is dispensed without quibble by doctors all over the land. We all expect to do more or less of this, but Dr. Cabot's scheme is a sorry thing indeed. This Michigan plan is sufficiently radical to rejoice reddest Russia. Through its workings, hospitals maintained by the State of Michigan shall be thrown open without charge to residents of the commonwealth, rich or poor. Unfortunately, Dr. Cabot and his followers fall short of several lengths of facts in their attempts to tie up ideals with circumstances. They would do better to weigh the situation carefully in the balance rather than to content themselves with eye measure and its resultant optical delusions.

Do they realize that in order to furnish themselves with temporary near fame they are cutting the throats of their fellow practitioners?

Dr. Hugh Cabot is a man of high ability. Let him, however, refresh his memory with the white elephants that have paraded out of the State of Michigan, and especially from the university at Ann Arbor in the years gone by. The herd seems to be exhaustless. Those snowy pachyderms keep on coming. Munsey's Magazine can

help Dr. Cabot out. Let him look on page 734, vol. 29, of the August number in 1903. He will find the comment there, "Barnum's White Elephant—a learned body of scientists at Ann Arbor pronounced his peroxide beast to be the genuine white elephant."

Even then "the handwriting on the wall." Yet Michigan refuses to be warned. Then it was Barnum's elephant. Last year it was Vaughan's. Today it is Cabot's. When will this certification of bogus white elephants cease at the U. of M.? For today the savants in that famous medical college located at Ann Arbor are patting on the back this intrusive white elephant known as the Socialization of Medicine.

Logicians continue to argue as to the relative responsibility of the "whole for the part." The privilege of making the "part responsible for the whole" Dr. Hugh Cabot arrogates to himself without scruple. Though he is dean at Ann Arbor he seems to have no hesitancy to put the entire institution on record as a backer for the socialization of medicine and the pauperizing of the profession. Dr. Cabot has an independent income as well as high ideals. He should remember that it is pretty hard to maintain high ideals on an empty stomach and figure out specifically just whether the poor, deluded fellow physicians of his state and the students at his college will be able to achieve medical miracles on a hollow belly. The proof of his figuring, of course, is due to be discovered at the expense of the health of a citizenry.

It would not matter if surface hoaxes were all that were involved. But this is a complex wherein must be considered the safety of the nation and the life of the profession upon which that very safety is built. Barnum's white elephant! The white elephants of the University of Michigan! The tail of Barnum's brute is swinging yet, brushing dust into the eyes of deluded individuals and kept wagging in the category of great American hoaxes. The tale of that elephant and what it did to the Ann Arbor savants will never be quiet.

If Dr. Cabot's plan for socializing medicine is all that he claims for it, and not a white elephant of the most vicious breed, why does he hitch his plan to medicine alone? Why doesn't he go ahead and try it out on a few other "dogs"? For instance, why not socialize the grocer, the butcher, the plumber, the cobbler, the cab com-

panies and the street cars? Why not state barbers, state laundries and all the rest of it just as soviet Russia has? If we must go through this experience, let us do it all at once, get the agony over and have done with it. A purge and a lavage will surely get it all out of our systems and then we can start in anew. The doctor who is nagged by the ward boss, sardined into street cars, held up for repairs on his bathtub, paying quintupled prices for butter, eggs and sugar is, according to Cabot, mounted high on the peaks of his dreams and gives away rejoicing his own skill, the fruits of his years of study and his health, to say nothing at all of the material welfare of his loved ones.

Dr. Cabot comes from Harvard University. That is a seat of untrammelled thought. But never, not even in its days of playing cradle for the nation's education, never then, thank God, was Harvard University a center for bolshevistic propaganda, calculated to sift rank poison into the sacred memories of the Boston tea party.

The white elephant is a tropical product. Let us send this one member of the herd, "Socialization of Medicine," down into the deepest pit, where the heat should satisfy the frailest. There, too, perhaps the ruddy glow from the flames will make even the blanched hide of the hoaxes reflect the semblance of a blush of shame.

Beware the white elephant. Arctic days entail arctic colorings as protective ensembles for wild animals. In this midwinter season white elephants roam with impunity through the snow-covered scenery. To be colloquial, they get by with a lot. Thanks to the false leaders within the ranks of the medical profession, that Ann Arbor beast, tagged with the Cabot O. K., is running wild. Recall the traditions of the sacred white elephants of the Orient. These gratuitous Jonahs were sent in a spirit of vengeance from one jealous tribal monarch to another. The sacred pachyderms were immune from destruction. They ate their recipients out of house, home and harem. There was nothing to do but suffer. The false leaders, the godfathers of soviet white elephants that over-ride the medical profession today, were placed in their high state by the very men whom now these white elephant sponsors would grind into the dust. What is the answer? Separate the "sheep from the goats." Take heed of the Scriptural adjuration, "He

hath put down the mighty from their seats—he hath exalted the humble.”

The medical profession today can do what the tribal monarchs of old could not. They can get rid of the white elephants.

And if the profession does not, the white elephants will get rid of the science of medicine as it is known today and that speedily. Dr. Cabot is false to his trust as dean of the University of Michigan when he perpetrates such a hideous scheme as his proposed pauperizing of medicine in that state. This white elephant of his will work harm to the university; it will work harm to the commonwealth and to the people. Cabot should be put on the carpet by the trustees of the University of Michigan; he should be taken to task by the physicians of Michigan, aye, the physicians, rank and file, the country over. That white elephant of his, the Socialization of Medicine, through unrestricted, unrecompensed hospitals, should be brought into the spotlight, the whitewash scraped off and the true blackness of his hide revealed. The sooner these things are accomplished the better it will be all around.

WHAT AILS THE MEDICAL PROFESSION?

In our October issue we mentioned twelve corrosives of the armor plate of the nation—the Public Health, and in our November issue we analyzed one of the corrosives in detail. In this and succeeding issues we take up and analyze in detail some of the corrosives eating at the vitals of the medical profession.

STATE PRE-EMPTION OF PROFESSIONAL PRIVILEGES. OTHER ECONOMIC FACTORS AFFECTING NECESSARY REVENUE.

The Sovietization of the country will come at a rapid rate and submerge the United States with the overthrow of the republican form of government into a soviet despotism if freak legislation is passed that is now pending in the national legislature and in various state legislatures. The Harrison Drug Act was the opening wedge and the gash has been followed up with excellent soviet leverage. New York state has seen the bitterest fight because the fight was waged most openly. Results there lured the bolshevists to transfer activities to Washington.

There the situation gets dangerous. A good bolshevist being a cross between a “short-haired woman and a long-haired man” and a fit subject for Krafft-Ebing, is usually endless of wind and elegant and voluminous of vocabulary. As spellbinders they are perfect 100 per cent plus. Their aim is to deprive the individual of his individuality and to turn his personal privileges into a communal joy ride. The state steps in and makes of itself father, mother and Baby Belle of every household. The church is a bad place for the bolshevist to start his debauchery. The church deals with the spirit. But as medicine stands next to the church, as medicine deals with the body and as bolshevism stands rooted in the physical, with sensuality one of its illy masked mainsprings, what more than that bolshevism should strike through man’s tenderest spots, his mortal ailments. The ancient enthanasists have nothing on the bolshevists.

The first step in this insidious campaign has been to lure the state into pre-empting professional privileges. In other words, telling the doctors how to care for the sick; in other words—though it has not come to this openly as yet—let us suppose Peter Pinker has the stomach ache; he needs Epsom salts and a mustard plaster. But when Dr. Smith starts in to prescribe this he finds he cannot. Mustard plasters beget a desire for heat when you are cold. Epsom salts are habit-forming—by their use constipation is induced. So Peter cannot have his plaster nor his physic. There is a statute against it. That statute was lobbied through an apathetic legislature by Tom Tittle, who made his money in shady hotels and saloons; George Gettit, who has wealth from a loan bank, and Martin Mettel, who wants to be Senator next year and has grabbed up all the traction systems between Chicago and Cairo. Peter can’t have his physic but he can go home and go to bed and have a nice nurse sent to him by the state bureau and the nurse will tell him to swallow pink tea and rub his feet. She knows more than the doctor does anyway, because she only studied for two years and the doctor studies for ten years and he got tired remembering long before she did. Furthermore, Peter won’t have to pay for his nurse, but a woman who scrubs floors down in the Ghetto and a stenographer with a mother and little sister to support, and all of them need shoes, and

a man without a wife, who lives in Decatur, will all chip in and help pay the tax that pays the nurse who takes care of Peter and keeps him away from his physic and his plaster—all of which sounds like Billy Sunday on the rampage. But it isn't. Rather, merely a direct visualization of what is coming to the citizenry and the physician of state medicine, compulsory health insurance and all the rest of it is dosed out to a suffering community of tax payers. Look at legislature records and learn a little bit about what is going on.

Already the state is running venereal disease clinics where not only are men who are unable to pay for this expensive but necessary treatment and pauper women of ill-balanced moral sense relieved of their menacing attributes towards the community, but the medical grafter who is the bane of all clinics because he could pay if he would, but prefers to get his health at the expense of somebody else, can get rid, without financial trouble, of the results of vice for which he probably paid a good round sum to some light o' love in a red light resort.

The state, of course, would be busied if it would tend to its own dooryard and let professional privileges of the individual alone. Surely a man who gives his life to his profession deserves the right to get a living wage from his skill instead of being a pre-empted claim for the political appointee. For, of course, when the state undertakes to run the individual the state has to hire a vast body of clerks and pay office rent and burn electric light and all the rest of it in order to view the individual as he is run. All the time meanwhile, on the doorstep of the state house sit those public charges who cannot help themselves and whom the state should aid. There are the violently insane who can scarcely be cared for in their immediate families without becoming public menaces; there are the epileptics, the delinquents and the dependents and the men and women in the prisons and corrective institutions. It would seem that the state has its hands full when it is about its own business.

However, when state business runs slack the professional politician can pauperize and bring under his thumb an educated class, when he systematically undermines the sources of revenue of the legitimate doctors whether by state gratuities or by the admission to fields of medi-

cine of such fakes as chiropractics, napropaths, osteopaths and all the rest of the unlettered but shrewd dollar-chasing crew. False hopes and fairy tales are best bets with that bunch. "It is natural for man to indulge in the illusions of hope," so says Patrick Henry. The fakes hand out plenty of hope built on illusions of many colors. They weave the rainbow and find the pot of gold at the end of their patient's pockets, and a prosecuting attorney hates worse than poison to mix up with 'em.

Doctors, of course, could fight the politicians and get a little self-protection if they would organize as the fakes do, are doing, will do and have done. Get down to the records of the Constitutional Convention held in Springfield, Illinois. Look at the statute books and see how charlatans are encouraged, nurtured and pampered by the same commonwealth that has rules, regulations and don't-you-dares that cause a legitimate honest-to-God physician to thank heaven that he is permitted to chew food with his own teeth.

Politicians and quacks are not afraid of the physician. "The docs are too proud, they won't organize—t'ain't ethical—they think," and oh, the sneer and the wink prodigious that invariably accompany the way the cheap politician and the fake utter the talismanic syllable "Ethical." To these brothers in iniquity the word ethical is synonymous for feeble-mindedness.

DR. BULSON GETS A "RISE" FROM DR. HUGH CABOT

In the October number of the *Indiana Medical Journal*, Dr. Albert E. Bulson, Jr., the editor, very properly castigated Dr. Hugh Cabot, dean of the medical department of the University of Michigan, for his advocacy of socialized State Medicine. The editorial brought a rise from Cabot, as will be noted by a copy of his letter to Dr. Bulson, which we print below, together with Dr. Bulson's extremely classical rejoinder.

It is quite apparent from Cabot's letter that he is attempting to hedge and we are inclined to believe that he will be ultimately smoked out, and that the Michigan men, if bolstered up by the profession at large, will make it so hot for the University of Michigan that there will be a change of tactics.

November 7, 1921.

Editor of the Journal of the Indiana State Medical Association,

406 West Berry St., Fort Wayne, Indiana.

My Dear Sir: Your editorial in the number of October 15 has been brought to my attention. Your reading of a newspaper quotation in which I am alleged to have said certain things is so diametrically opposed to the facts that I make haste to write you on the matter. You have apparently concluded from the newspaper paragraph which I do not recognize, that I am at some time supposed to have advised the admission to the University Hospital of patients who could afford to pay. Now this is precisely the reverse of the position which I have always taken and now take in the matter. The only alteration which has been made in the admission of patients to the University Hospital since my coming here two years ago has been the ruling that patients who can afford to pay a fee shall always be required to do so. I am quite of your opinion that it is improper to use the money of the state for gratuitous service to people not entitled to it and this opinion I have long held and expect to continue to hold. If the University Hospital were to admit patients who could afford to pay, I should be wholly of your opinion. As it does not and as every precaution is taken to avoid this form of pauperism, it appears to me that the criticisms you level at me are not well taken.

My opinions in regard to state medicine to which you also refer are quite the reverse of those with which you credit me. I have always been opposed to it and my published statements on the subject might readily be obtained. I would refer you to my paper entitled "Compulsory Health Insurance, State Medicine or What?" delivered as the annual discourse before the Massachusetts Medical Society, June 9, 1920, at the end of my first year as Professor of Surgery at Michigan. I enclose a copy of the paper in order that you may see that I was at that time violently opposed to state medicine. I would also refer you to my address at the opening of the Medical School this year, which may be found in the November number of the *Journal of the Michigan State Medical Society*. From this you will appreciate that my opinions have not altered in such a way as to become more favorable to state medicine and I therefore think that in some way you must have been misinformed in regard to this.

I assume that you would not willingly do injustice to a colleague and therefore I assume that your willingness to condemn and censure me on opinions that I have never held and do not expect to hold is due to misunderstanding. I do not know that this is the proper place to refer to your strictures aimed at me concerning "soft berths," but without going into what may be regarded as a personal question, it is perhaps proper to point out that those looking for "soft berths" do not do so by accepting positions that cut their incomes more than in two. I do not make any claim to credit because I have seen fit to reduce my income by a large amount, but I do think that it entitled me to

be free from the assumption that I am looking after my own comfort in doing so. Considering the rather severe way which you have written concerning me, I would ask that you give this at least as much publicity as you have given your editorial.

Yours very truly,

HUGH CABOT, Dean.

November 10, 1921.

Hugh Cabot, M. D., Medical Department, University of Michigan, Ann Arbor, Michigan.

My Dear Mr. Cabot: Your letter of November 7, taking exception to an editorial in the October number of *The Journal*, has been received and noted.

I have not the slightest intention nor desire to misrepresent or misquote you or anyone else, and I am just as much in favor of those things which make for medical progress as you are. Perusal of numerous newspaper clippings covering some of your speeches and talks with various Michigan medical men who thought they rightly interpreted your attitude have led me to believe that you favor various schemes which many of us believe not to be to the best interest of the public or the medical profession at large. From conversations with medical men in other states it would seem that I am not the only one holding such opinion. You may have been misrepresented and perhaps the unfavorable opinion is based upon a wrong interpretation of what you have said and what you have been doing.

You are now the head of a great medical school that, I do not think you will deny, has been guilty—certainly until very recently—of a very loose method of determining who is entitled to gratuitous services at the hands of its hospital staff. While I do not think that the pecuniary phase of the question, so far as it affects medical men not connected with your institution, should be overlooked wholly, yet there are broader considerations which justify me in believing that the practice carried on by your hospital and its staff, in the final analysis, is detrimental to the public as well as to the medical profession. Knowing that this practice exists, are medical men not justified in interpreting the statement of the dean of this institution as indicating that the practice is to continue when you say, as you were reported in the *Detroit Free Press* and which I notice you do not deny, that "rich and poor should be treated alike"? This statement is reported as having been made by you in connection with a discussion of the subject of admission of patients to the University Hospital.

I had not the pleasure of seeing your paper published in the *Boston Medical and Surgical Journal* until I received a reprint of it from you and today I have received the November number of *The Journal of the Michigan State Medical Society*, containing your address delivered at the very recent opening of your Medical School. In the latter you acknowledge that there has been misapprehension in the minds of the physicians concerning the attitude of the faculty of your institution and this necessarily must indicate

that there has been occasion for much misapprehension.

Neither you nor any member of the faculty can justly deny that the Medical Department of the University of Michigan has done more to pauperize the community by granting gratuitous medical and surgical treatment to the well-to-do than any one institution or factor in the middle west. In fact the action has been so flagrant that it has been a common remark among Michigan doctors, as well as doctors in some contiguous states, that it is exceedingly difficult to secure even a very ordinary fee from many well-to-do people for the reason that those people claim that they can go to Ann Arbor and have their work done for nothing, with the hospital charges as their only expense. Furthermore, such practice on the part of your university helps to make it impossible to secure decent remuneration from the rich industrial organizations or insurance companies for any medical or surgical services rendered and I do not think that anyone will admit that those organizations should be an object of charity at the hands of the medical profession or even the state.

So far as I know, not a single person has objected to the admission of well-to-do or very wealthy patients to the University Hospital or the Medical School clinics, providing they pay respectable fees for the services, but objection is raised to giving these patients *gratuitous* services, or services at a very nominal fee. The practice followed by your institution is wrong in principle and in the end is bound to end disastrously. In the discussion of this matter we may overlook the unfair competition of the university, with its injurious effects upon the private practitioner.

Primarily, your University Hospital was established as a teaching hospital and as such it not only fills a great need but has received a sufficient number of patients for teaching purposes and has furnished skilled gratuitous services to many deserving poor. If for any reason you fear that there will be a dearth of material it seems to me that it would be possible to secure all the cases necessary, and even more than your institution can care for, by appealing directly to the medical men of Michigan to send you one or two cases each throughout the year as you already have suggested in an indirect way. It should be understood that these cases come from the deserving poor, and if others are referred to the University Hospital such cases will be required to pay fees consistent with ability to pay.

Now that you say so, over your own signature, I am willing to believe that you are opposed to the very practices that have made the Michigan University the subject of bitter criticism, and it is unfortunate that you, in your choice of words, have had your real attitude misinterpreted. Knowing what the Hospital of the University of Michigan has been doing, and then have you openly say that "rich and poor should be treated alike" when they enter the University Hospital, makes it appear that you are sanctioning a continuance of the policy that heretofore has existed. It appears that what you wanted to say is that so far as being

admitted to the hospital is concerned, anyone can be admitted, but all are *not* treated alike so far as paying for the services is concerned. If the hospital of your institution now is charging well-to-do patients fees consistent with their financial circumstances, which seems to be a recent innovation, then that fact should be made known to the medical profession to the end that the justifiable criticism formerly aimed at the hospital shall cease and deserved cooperation be given you and your confreres on the staff.

Concerning my reference to the "soft berth" perhaps that is taken in a manner not intended. I knew that you gave up a private practice that netted you more money than you will get out of your present position, though I think you will agree that being the head of a great university, with a fixed salary that enables one to live more than comfortably is, in the minds of many, sufficient to counter-balance any loss sustained in giving up private practice. But what about the poor though competent doctor who doesn't have such a position and has his income from private practice unnecessarily and unfairly reduced in consequence of the competition of the university which brings about this discussion?

The term "State Medicine" has been applied rather loosely, but I think it generally is conceded now that by state medicine is meant providing medical and surgical attention by the state to all who desire it and this in the end means wiping out private practice wholly, or at least to a very large extent. Your scheme for furnishing "community medical and surgical service" by the members of the staff of your institution and a selected few outsiders, if I understand it correctly, is a step in the direction of state medicine in that it paves the way for the operation of a more comprehensive plan directly under the control of the state. Aside from this it starts out by creating a sort of caste in the medical profession, known to the public as such, which is bound to create dissensions and produce vicious results.

I am in favor of everything which tends to improve public health conditions and ameliorate the sufferings of the sick and disabled, but I am opposed to all practices, under whatever guise, that tend to pauperize the community, to stifle individual initiative in medical practice, and unjustly trample upon the rights and privileges of individual members of the medical profession. Hospitals, whether federal, state or municipal, should be open to people, irrespective of social position, but the medical and surgical services should be gratuitous only to the worthy poor, and charged for to all others consistent with their ability to pay. The record of your University Hospital and your statements which you now say have been misconstrued are not in keeping with the plan mentioned and that is the reason for the criticism to which you take exception. The medical men of Michigan have certain inalienable rights and one of them is the right to practice medicine without the unfair and unjust interference with their efforts to earn an honest livelihood. The University of Michigan has trampled upon this latter mentioned right in not only a ruthless manner, but in a manner which

true economists believe to be detrimental to the public weal.

I believe that I am safe in saying that practically all of the visionary but impractical if not wholly vicious schemes which tend toward the socializing of medicine owe their origin to medical men, erstwhile leaders in the medical profession, rather than to any lay person or lay organization. It is the so-called leaders, like yourself, who start innovations, sometimes with good intentions but more often with selfish ends of one kind or another in view. Not infrequently the innovations are not for the best interests of all concerned and at such times criticism and opposition is justified. I hope the day has arrived when every right thinking doctor in Michigan, through his voice, as well as his vote, will register his opposition to the various schemes for socializing medicine, and that will mean offering vigorous protests to some of the plans that some of us believe you have sanctioned and supported.

Concerning this matter of criticizing the sponsors of detrimental innovations as they affect the medical profession, permit me to quote from a letter to me, commenting upon the editorial to which you take exception, as follows: "There is no position in America so high but that its occupant can be criticized for his words and actions. It has become the habit in America to consider the so-called leaders of the medical profession as immune from criticism by their professional brethren—let us change that habit!"

Very truly yours,

ALBERT E. BULSON, JR.,

Editor of The Journal of the Indiana State Medical Association.

P. S.—In accordance with your request your letter, together with this reply, will be given as much prominence in The Journal as was given the editorial to which exception is taken.

OPENING THE FLOODGATES TO THE SOCIALISTIC RESERVOIR

In the congressional record for November 1st, Representative Layton of Delaware (a doctor) has some very telling arguments against the Sheppard-Towner Bill and the Towner-Sterling Bill (formerly the Smith-Towner Bill) the former establishing lay control of the practice of medicine and the latter the federal control of schools. He also deals with legislation of kindred character to the ones mentioned. We quote the following paragraph which shows clearly the ultimate result to be looked for from this legislation:

We do not propose to ask for much money to support this legislation—we want only \$1,500,000 to begin with. What man is there in this House who does not know the subtle seductiveness of this statement? Who,

if he is frank and intelligent and has watched the growth of bureaucracy, does not know that this bill will ultimately call not for thousands but for millions; yes, and even for billions, if it is to function in the thousand and one directions which the proponents of this measure will ultimately discover?

This bill, if enacted into law, means the nationalization of medicine and surgery. Likewise the Smith-Towner bill means the nationalization of education. . . . Digressing in a measure, let me ask the House if it wants education nationalized? Is it possible that we can be so foolish as to want an individual, or even a body of individuals, to choose the textbooks for the children of this nation—the same textbooks for Maine as for Florida, for Oregon as for Texas—the textbooks on history, on political economy, on sociology, and even indirectly on theology and religion?

I unhesitatingly say that to do this, to place this power in the hands of one man, with all the power and prestige of a cabinet official, would make it possible to corrupt the minds and hearts of the people in one generation. It would place all our most cherished traditions at the mercy of an autocratic will. . . . But if this bill and the Smith-Towner bill, and the Fess amendment are enacted, the floodgates to the socialistic reservoir will be hoisted and never let down again. There would be no logical reason to let them down. If these measures can be made into law, there is no reason why any other socialistic legislation, however rank, may not be enacted.

The Congressman who today concerns himself with constitutional questions is somewhat exceptional. He does not ask himself, "Is this measure in keeping with the purpose of the Constitution?" but rather, "What do my constituents think?" The Constitution does not vote. Constituents do.

After quoting the above, Mr. Layton makes an appeal for a back to the Constitution movement. As Mr. Layton sees the situation, the Federal Government is striving to control the schools of the country, to rock all the cradles (if the birth controlists permit babies to be born), to nationalize medicine, labor, education, railroads, stock yards, farming, personal habits of individuals and in the end his religion.

MEDICAL FEES AS COMPARED WITH LEGAL FEES.

A group of lawyers in Chicago were allowed over a million dollars in legal fees in settling the estate of one of our rich merchants where no particular legal skill was involved and where no question of the saving of life entered into the proposition.

Contrast the legal situation throughout the

country with that of the management of the Johns Hopkins hospital which fixed a top price of one thousand dollars for an operation, no matter how difficult the task or how wealthy the patient. The sum is a large one, and no surgeon who can command such fees is in danger of suffering for the necessities of life. But has anyone heard of a law school limiting the fees which a lawyer may charge for his services?

Apparently not. Lawyers—the high-priced corporation ones—deal with property, while surgeons deal with life; and property is by far the better paymaster.

"Skin for skin, yea, all that a man hath will he give for his life," remarks Satan in the controversy over Job. Possibly Satan was right, but the man must be brought very closely to the choice before he takes that attitude. Under ordinary circumstances, a man will pay willingly for winning a lawsuit a sum which he would denounce as rank robbery if asked by the surgeon who frees him from cancer.

THE APPEARANCE OF THE DEFENDANT IS A WAIVER OF NOTICE

COLORADO SUPREME COURT DECISION HAS A BEARING
ON MEDICAL CASES TRIED BEFORE ETHICAL RE-
LATION COMMITTEES OF STATE AND
COUNTY SOCIETIES

PUBLISHED FOR THE INFORMATION OF THE MEDICAL
PROFESSION

People vs. Brown.

(Not yet reported). Decided by Supreme Court, April, 1921. Motion for new trial overruled June 6, 1921. Brown applied for a license to practice chiropractic which was denied by the board by a resolution containing the finding "that the applicant does not possess the qualifications required by law." The statute provided the applicant should possess a good moral character and should have been continuously engaged in the practice of chiropractic within the state for a period of six months before the law went into effect. The statute also required that the applicant should be given thirty days' notice of the hearing before the board with an opportunity to be heard at the time specified before his license could be denied. The record did not show that the respondent had had any notice of the hearing but the record did show that the respondent had in fact appeared before the board and was examined concerning his qualifications. The action of the board was reviewed by certiorari on the ground that the applicant had not been given a hearing

before the board on notice required by law, and that the finding was too general in that he was not specifically informed as to the ground on which his license had been denied. *The Supreme Court affirmed the action of the board holding that the appearance of the defendant was a waiver of notice and that a specific finding as to the grounds on which the application had been denied was not required by statute; that the board had jurisdiction of the subject matter and of the person of the applicant and that its finding as to his qualifications was conclusive on the court.*—*Federation Bulletin*.

THE NURSING UNION HAS COME TO BE THE MOST AUTOCRATIC CLOSED SHOP IN THE COUNTRY

Dr. Charles H. Mayo, *Pictorial Review*, October, 1921, says: The nursing union has come to be the most autocratic closed shop in the country.

Desiring to neutralize this truculent statement, he qualified, "Mind you, I don't blame the nurses of the country for organizing. They were driven to it because of the apparent deafness of those in authority. But they have carried their methods too far and with too high a hand, and in doing this have defeated their own purpose, for they have lost sight of the real impulse of their profession—the alleviation of the pain of the world. Ministration to the sick and the dying cannot be bound by hard-and-fast laws. They are the divine right of the poor as well as the rich. A prohibitive price cannot be put upon them. And that is what the nurses are doing. Too great a commercialization of their services is making proper care of the sick impossible for those in moderate circumstances. In addition, their demands as to hours and regulations can not be met in hospitals if the hospitals are to maintain their high standards of service. I understand that in some hospitals the nurses have even resorted to strikes. This is a shocking indictment of the profession and I cannot believe that the nurses involved were heartily in sympathy with them. They must have been misled by the agitation of one or two malcontents and incompetents. Supposing that doctors should go on strike! The thought is no less appalling than a nurses' strike! Therefore with the union becoming a menace it is time for the public to cooperate against it."

To my question as to how this was to be done, he replied, "In several ways, but particularly by the training of country girls as sub-nurses with a course of eighteen months or two years and pre-educational requirements of a year or two in high school.

"The educational standards for registration of nurses as set down by the nursing boards of the various states have gone beyond all reason. Any intelligent girl can acquire in two years all the knowledge necessary for the thoroughly competent nurse. I know that in my work I never have to ask any nurse to do anything which she could not have learned how to do in two years' training. But as the laws of most states demand high school pre-education and three years' training for

the registered nurse, the only way to circumvent them is by training sub-nurses or nursing aids who will accept smaller pay, whose demands are not so exacting and who will be proficient enough to take hold of almost any case presented to them.

"The third year in the training course is little more or less than exploitation of the student nurses for the benefit of the hospitals. And it is closing the field to hundreds of thousands of country girls with a fine desire for service and who cannot, for economic reasons, finish high school nor spend three years in training. These girls are contented with a fair wage and fair living conditions. They do not demand luxuries. They have been used to working and they are not possessed with the unrest which besets more complicated centers of population."

Dr. Mayo, however, does not desire to be unfair to the profession. He sees many reasons why it was driven to its present autocratic stronghold. He thinks the public and those in authority should be made to understand these reasons. To help in this understanding he gave me a broad outline of the situation as it appears to him.

"What is happening with nurses today is not at all peculiar," he said. "The same evolution—or revolution, if you will—is going on all over the world, among all peoples and in all classes. There is revolt against old traditions, old customs, old forms and modes of service—and the result is that the majority of human beings are thinking in terms of a great and deplorable selfishness. The tragedy of the nursing shortage is that it is making itself felt at a time when, because of the war and its aftermath of unrest, there is need of reconstruction—a reconstruction that can be gained only by the untiring service of those in whose hands and talents lie health giving powers, and in this respect the nursing profession has failed to realize its responsibilities and obligations. However, under existing conditions, I cannot say that the nurses, individually, are entirely to be blamed. Many factors have combined toward their revolt—the doctors, the hospital regimes, the public attitude toward nurses, the change in modes and manners of living, and the state governing bodies which make laws regarding the standing and standards of nursing, as well as the viewpoint of the nurses themselves.

"Time was, and that not more than forty years ago, when the demand for nurses was limited. They were used only in childbirth and in some few surgical cases. The population here in this country was almost entirely Anglo-Saxon. The cities were not crowded with alien peoples from lands where dirt and poverty had bred disease and contagion. Surgery was an undeveloped science. Public health service was unknown. The hospital was not the general harbor for the ailing of all classes as it is today. In those days the training course was something of a purgatory for the student nurses. They were made to do the worst kind of drudgery and in many instances they had little more standing and were treated with less distinction than servants or scullery maids. These circumstances divided those who took up the profession into two classes

—young women with a real flair for self-sacrificing service and those who sought a fair living without investment or the necessity of an enlarged education.

"Gradually things changed. The population grew in variety, as in number. From all the dense and poverty-stricken countries of Europe and western Asia, where opportunity for betterment was zero, immigrants crowded into our cities, bringing with them diseases which are the outcroppings of squalor and malnutrition. Out of this condition grew the need for public health nurses. The hospital, because of its better equipment and service, took the place of the sick room in the home. All of these things created a larger demand for the trained nurse. For a while the demand was met and it would have stayed met, but the hospitals and the public failed to realize that the increase in demand had put a premium on the nursing service, which must be paid or the nurses would assert themselves and set their own standards in training conditions.

"Why, it was outrageous—the tasks that student nurses were set to do, such as scrubbing floors on their hands and knees, washing dishes, sometimes all day long, cleaning out lavatories. For this they received less than a servant's wage—six or eight dollars a month—out of which they had to pay for their uniforms and washing. They were overworked from fourteen to sixteen hours a day and were allowed out of the hospital only one night a week. Private-case nurses sometimes had all of the housework to do in the homes to which they went; their days were often from six in the morning until midnight, and when they went to bed it was with one eye open and both ears keyed to the slightest move or sound from the patient. And their pay was but twenty dollars a week.

"The nurses might have jogged along as things were had it not been for a new and not altogether commendable evolution of living. Modern inventions, such as the movies and automobile, struck gay chords in the diapason of life. Enlarged economic opportunity for women and the high wages and enormous profits of the war years brought about a period of extravagance. Political equality gave those concerned in social justice a wider scope for welfare activities. And it was not to be supposed that the trained nurse and the young woman in training would stand quietly aside and see the whole world of young people racing by them without wanting to get into the race themselves. Naturally, they wanted good clothes and good times and care-free lives when every one else had them. So when the war was over and they came back tired out and there seemed no light ahead for them, they did what workers the world over were doing—they organized. Which was all right if they had kept ever before them the high mark of their calling. Their demands for the rights of the student nurse were equitable and within reason. Eight or nine hours are all that any girl who is giving her services to a hospital should be required to work. She should have wholesome recreation and comfortable living quarters and a good, healthy diet. She should not be required to do chores. She should receive a fair wage. She

should have a certain fundamental education and a degree of liberty.

NO MAN CAN AFFORD TO PAY SUCH CHARGES NEITHER CAN THE HOSPITALS IF THEY WISH TO KEEP OPEN

Dr. Charles H. Mayo, *Pictorial Review* for October, 1921, in speaking of the nurses' trust and after arguing the advantages given the nurses by the modern system of nursing education says:

"In return for these she should give the very best service of which she is capable. When her period of training is over she should step into her profession with the same high impulse. She should expect fair wages, a chance to enjoy freely the best that life has to give, and the acknowledgment by the public mind of the dignity and distinction of her place in society. But she must not become exorbitant—and this is the threat which looms not a comfortable distance away. Seven dollars a day for an eight hour day is more than exorbitant; it is prohibitive. It means that in cases of dangerous disease where constant skilful care and watching are necessary to save the life of the patients, three nurses must be employed at a daily cost of twenty-one dollars a day. How, I ask, can the man and woman of average means afford to pay such charges? They can not do it. Neither can the hospitals if they wish to keep open their doors.

"As things are now, in the larger cities of the East, only the very rich or the very poor can receive proper treatment and care for their sick. The very rich can pay for it; the very poor get the best of care for nothing. The most skilful surgeons and physicians are always to be found on the staffs of charity hospitals. Out of this a great danger threatens. If the present prohibitive cost of sickness for the middle-class man continues, he will be driven to pauperize himself, and nothing is so disintegrating to human integrity as pauperization. It lessens self-respect and tears down the tissues of self-reliance and self-determination. Can you think of a more disheartening predicament for a hard-working, right-living man, when there is sickness in his family, than to have to declare himself a pauper in order to be admitted to the free ward of a hospital? And yet this is often necessary where the pay wards ask a larger fee than he can afford. It is a peculiar alinement, too, putting, as it does, a bonus upon indigence—for the idle and useless, making no contribution toward the general good, get the best of care for nothing, while the industrious, who contribute toward the better standing of their community, and who could pay a reasonable fee, must go without or be classed as paupers.

"It is for this reason that I do not believe in free care for the sick. As economic conditions are at present common humaneness makes it necessary. Most men can pay something. If it is only a dollar they at least are given the chance to retain their self-respect through the knowledge that they are doing the best they can. And when they are cured and on their feet

they can make the effort to pay more. There will always be the destitute, and they, of course, are public charges and their care should fall upon the public.

"For the sake of better analysis and emphasis I must revert to the sub-nurse. This is a title that does not sound good to my ears, for I think it superfluous and unnecessary. The term nurse should be inclusive. The proper adjustment lies not in nurses and sub-nurses, but in a modified, uniform law setting the standard for training and registry at two years' high-school education and two years' general hospital work. Then for the ambitious there could be special graduate courses in higher nursing, such as X-ray and radium work, anesthesia, public health work, et cetera. But since there is some question of States' rights, we will have to call the two-year girl the sub-nurse. I am sure that the country districts and smaller cities could easily muster 100,000 such high-minded girls, who would gladly make their vocation the answer to this great national need.

"And here I take up again the virtue of service. Good nurses are born. They are not made, any more than good stenographers or good writers or good lawyers are made. Education helps, but if a girl has all the education in the world and the best of secretarial training, and yet lacks manual dexterity and sound business sense, she will not make a good stenographer. All the training in the world will not make a good nurse of a girl who is always thinking about herself and whose heart does not go out toward suffering humanity in a desire to ease that pain by self-sacrificing service."

CIRCULARIZING FALSE AND MISLEADING STATEMENTS

The following resolutions were unanimously adopted at the Mid-Western Association of Anesthetists meeting held in Kansas City, Missouri, October 25, and by the direction of that body were to be sent to all medical journals of the country, which might be interested in that publication. The resolutions recite:

WHEREAS the middle western states are being circularized with false and misleading statements regarding the general practice of anesthesia and particularly the use of nitrous-oxid oxygen, and

WHEREAS the Mid-Western Association of Anesthetists is formed for the study and promotion of truth as it relates to the specialty of anesthesia in medicine, now therefore

Be It Resolved that this society, in convention assembled, condemns the statements and the actions of Dr. J. F. Baldwin of Columbus, Ohio, in his utter disregard for truth and official records of recognized institutions as these relate to the practice of anesthesia and his efforts to discredit scientific advance by the unethical practice of disseminating false and misleading statements among medical, dental and hospital authorities throughout the United States.

MORTON, THE IMPOSTOR, IN THE HALL OF FAME

Through the courtesy of Dr. Samuel S. Briggs, of Nashville, the Editor of the *Journal* has had the privilege of reading a number of books and reprints that had been assembled by his distinguished father, Dr. W. T. Briggs, a short time before his death, in which are set forth the claims for the discovery of anesthesia by Wells, Jackson, Morton and Long. The controversy among the three New England contestants for the honor and for remuneration by Congress for discovering anesthesia was one of the bitterest in the annals of medicine. The "war of pamphlets," what would now be called propaganda, as carried on by Wells, Jackson and Morton, and their friends and relatives, make interesting reading after more than half a century.

The Editor of the *Journal* has tried to read without prejudice the evidence as presented by various affidavits of the friends of each, and the facts seem to be as follows: Wells first produced nitrous oxide anesthesia for the purpose of extracting teeth in 1844¹; Jackson suggested to Morton the use of ether in dentistry and surgery in 1846². Jackson explained to Morton the properties of sulphuric ether and showed him how to use it on a towel. Soon afterwards Morton,³ giving Jackson no credit for the information, without which he could not have used ether, persuaded a group of surgeons in the Massachusetts General Hospital to allow him to etherize some of their operative patients; and the surgeons published the fact that the long-dreamed-of surgical anesthesia had been discovered.

Had the three contestants known that Crawford W. Long, of Georgia, could present indisputable evidence that in 1842 he had removed a tumor from the neck of James Venable, while under the influence of ether, and that he had performed several other surgical operations on patients whom he had anesthetized before any one of them claimed to have used an anesthetic⁴, it is probable that they would not have wasted so much time and money in trying to establish their claims, with the hope of securing a reward of \$100,000 from Congress for being a benefactor to mankind.

MORTON THE MERCENARY EXPLOITER OF ANESTHESIA

The facts as presented by the friends of Wells and Jackson appear to place Morton as a glory-grabber equal to Dr. Cook of Arctic fame. They also make it plain that Morton's chief purpose was to exploit for private gain the discovery of one of the greatest boons to mankind. Immediately after using ether in November, 1846, Morton patented it under the trade name of "Letheon," which patent, by the way, Jackson seems

to have good ground for asserting was obtained by fraud.⁵ A few weeks later Morton employed Daniel S. Blake to travel through New York and the New England states selling the patent right to dentists and surgeons to use "Letheon."⁶

Morton was modest in his terms for the use of a drug that had been known for many years prior to its employment as an anesthetic. In a circular dated November 25, 1846, Morton generously offers the following terms to dentists for the rights to his invention and apparatus for producing ether anesthesia:⁷

In cities 150,000 inhabitants, \$200 for five years.

In cities of 50,000 and less than 150,000, \$150 for five years.

In cities of 40,000 and less than 50,000, \$100 for five years.

In cities of 30,000 and less than 40,000, \$87 for five years.

In cities of 20,000 and less than 30,000, \$75 for five years.

In cities of 10,000 and less than 20,000, \$62 for five years.

In cities of 5,000 and less than 10,000, \$50 for five years.

Surgeons' licenses for five years, 25 per cent. on all charges made for performing operations wherein the discovery is used, etc.

What would the Council on Pharmacy and Chemistry of the American Medical Association have to say if "Letheon" were put on the market today? What would some of our surgeons do if they had to give 25 per cent. of their fees for the privilege of using ether? Where would the anesthetists come in, if the surgeons had to give up one-fourth of their fees for operations on patients under ether? Morton seems to have been the first and the arch fee-splitter.

MORTON, THE CHARLATAN DENTIST

That Morton was untruthful as well as mercenary is shown by the fact that under his signature in the *Boston Atlas* he advertised falsely to the public.⁸

The subscriber, having returned from Washington, begs leave to give notice to his friends and patients (Congress having decided the ether controversy in his favor), that he is now able to devote his attention to the various operations in dental surgery, particularly to the administration of ether. Persons contemplating having artificial teeth inserted are assured that nothing can surpass the excellence of his operations in this department.

W. T. MORTON, M. D.

Congress never acted upon Morton's claims. The committee, by a vote of 3 to 2, reported his bill favorably, but it was never passed. Such blatant advertising of fraudulent claims proves that Jackson was justified in calling Morton an "unprincipled charlatan."

The book published by Senator Truman Smith, of Connecticut, setting forth the claims for the honor

1. Data on anesthesia prepared by Hon. Truman H. Smith, United States Senator from Connecticut, published by John A. Gray, New York, 1859.

2. Congressional Report on ether discovery by Stanley and Evans, 1852.

3. *Ibid.*

4. Southern Medical and Surgical Journal, New Orleans, December, 1849, statement by Dr. Long with affidavits of Charles Venable, et al.

5. Congressional Report, Stanley and Evans, 1859, p. 41.

6. *Ibid.*, p. 27.

7. *Ibid.*, pp. 33-34.

8. *Ibid.*, p. 32.

of the great discovery of anesthesia by Wells is particularly severe on Morton, and Senator Smith "assumed full responsibility for his statements."⁹ Senator Smith says that "Dr. Wells perished by his own hand in a paroxysm of insanity, induced, as his friends believe, by the attempt of Morton to filch from him the fame of his great discovery."¹⁰ Senator Smith asserted that Morton knew of Wells' use of nitrous oxide in 1845. Morton had practiced dentistry at Farmington, nine miles from Hartford, for several years and had visited that city in 1845. Morton had studied dentistry under Wells in 1841 and 1842. Wells had also demonstrated the use of nitrous oxide in 1845 in Boston and suggested at the time that ether might be used for anesthetic.¹¹ It will be recalled that Morton claimed to be not only the first to use ether, but "the discoverer of anesthesia." From the affidavits published by Senator Smith it is clear that Morton knew all about Wells' use of nitrous oxide in 1845, a year before he used ether.

Senator Smith also charged that Morton maintained in Washington an expensive lobby, who dispensed "champagne, segars and oyster suppers" to Congressmen and Senators.¹² Senator Smith further charged that Morton used stolen money, about \$50,000, furnished him by one Tuckerman, a defaulter, who expected to be reimbursed by Morton when he received the money which he hoped to get from the Government.¹⁴

Morton would not have been so severely criticised had he not been so mercenary. Among other efforts to profit by a scientific discovery, for which he deserves little credit, was to have introduced in Congress a bill granting him \$100,000 for the patent rights on "Letheon" for the Army and Navy.¹³ Think of a man who wanted pay for using an agent to alleviate the suffering of men wounded in the service of their country.

The Editor has also read carefully the claims of Morton. His son, Dr. William J. Morton, of New York, strives hard to prove that his father was the real discoverer of anesthesia and that all the other claimants were impostors.¹⁵ He makes as good a case as possible by perverting the facts, and many who have heard only Morton's side are convinced that to him belongs the honor. Indeed, the Morton propaganda has "fooled many people a part of the time," and to such an extent that by a vote of the "intellectuals" of the United States he has been given a place in the Hall of Fame as the discoverer of anesthesia. That the histories and the encyclopedias, with few exceptions, have been misled by Morton's propaganda is the reason he is generally given credit for having been the first to use an-

esthesia. Few have taken the trouble to get the facts of the case.

HALL OF FAME SHOULD INVESTIGATE MORTON'S CLAIMS

It is never too late to right a wrong, and since Morton has been given a place in the Hall of Fame, it would seem that those in charge of that institution should appoint a committee to investigate the matter to determine if Morton deserves the honor, or if it has been given through misinformation that has been carried in histories and encyclopedias for half a century. The Editor of the *Journal* believes that an unprejudiced committee would find that Morton was an impostor and a mercenary promoter; and that to Crawford W. Long belongs the honor of discovering surgical anesthesia.

The presentation of the claims of Dr. Crawford W. Long as the discoverer of anesthesia by Dr. Marion Sims should be read by those who desire to know the truth about the matter. Sims¹⁶ gives a judicial statement of the relative claims of Long, Wells, Morton and Jackson. His conclusion was that there can be no doubt of the fact that the honor belongs to Long. —*Southern Medical Journal*.

STAMMERING, AS IT IS

ERNEST TOMPKINS, M. E.

PASADENA, CAL.

Four years ago Fletcher wrote in regard to stammering, "The sufferers from this affliction have looked to the medical profession for relief since the existence of that profession and have looked in vain. While medicine has made almost unexampled progress in the understanding and treatment of known diseases, and has added to the list of those that were formerly unknown, regarding this old, old malady, whose record dates back at least to the Egyptian hieroglyphics, there is in the medical world of to-day little more than a confusion of personal opinions and theories. . . . This subject is of sufficient importance to deserve better treatment."¹ This arraignment of Fletcher's, although it fails to give the profession credit for Dr. Liebmann's work, is not overdrawn in respect to the confusion; and it is as true today as it was four years ago. Those who have real regard for humanity and science and the medical profession will endeavor to reduce that confusion.

Before we can reduce the confusion we must realize the causes of it, and a little reading of the subject will show one cause to be mixed truth and error. Take a current example. Not long ago Dr. Kenyon made two contributions to the subject, a rather elaborate thesis² and a short article³. These are valuable in that they show the habit nature of the disorder, even in its details; but their value is largely nullified in that they pronounce the disorder to be developmental. Rectification was of course necessary. Dr. Swift attempted it.⁴ He properly shows the invalidity of the

9. *Anesthesia*, published by John A. Gray, New York, 1859.

10. *Ibid* Introduction, p. 11.

11. *Ibid*—many affidavits.

12. *Ibid*, p. 130.

13. *Ibid*, Introduction, p. 5.

14. *Ibid*, Introduction, pp. 5-6.

15. "The Invention of Anesthetic Inhalation or Discovery of Anesthesia," by William J. Morton. D. Appleton & Co., 1880.

16. *Virginia Medical Monthly*, 1882.

developmental allegation, but he denies the emotion of stammering. In short, he corrects one error but sets up a more serious error. Now what chance is there of getting the truth when every move in that direction is saturated with error?

In Dr. Martin's article entitled "Stammering," published in the *Medical Record* of May 29, 1920, although the proportion of truth is large, still there is a modicum of error. Let us endeavor to make it all truth. And let us further endeavor to make the truth convincing. If that article can be revised from what it contains and can be made thoroughly consistent, then the reader ought to be convinced that the revision is reliable and instead of accepting it on the authority basis with necessary reservations, he can accept it on the reason basis with dependability.

Dr. Martin tells us the nature of the disorder, and with slight interpretation of his account we may obtain a clear conception of it. He says: "A patient may, for instance, try to say 'mother' with his mouth wide open—an impossible position for the letter 'm,' which requires the lips pressed together. The indelible impression made upon the mind of the stammerer by his effort to speak, increases the physiological cause of his suffering. When laboring under the compulsive idea that he is unable to articulate normally there is an undue amount of nerve energy released by his brain in the attempt to control the organs of speech. The muscles laboring under this excessive innervation become rigid, jammed together, and a general juxtaposition results."

Now in the interpretation of Dr. Martin's descriptions, in order to be backed by high medical authority and to avoid suspicion of bias, I will, for the general interpretation, quote Dr. Liebmann's words regarding the stammerer: "If he has to speak, he becomes excited and makes voluntary efforts intended to bring out the 'difficult' sound, but which really obstruct it."⁸

Before we take up the special interpretation it is advisable to bear in mind that normal speech is automatic and that the stammerer's efforts are voluntary. Credit for this distinction is also largely due to Dr. Liebmann.

When the stammering child wants to say "mother" it remembers the humiliation of past failures in uttering that sound. It has been laughed at or reproofed. In order to avoid further humiliation it makes a conscious effort to say the word, but no one knows how he talks, so the effort is misdirected. In this case the child probably reasons, "I must open my mouth in order to say the word," and it opens its mouth too soon, thereby obstructing its normal speech. For this failure it is further humiliated, and this humiliation goes to increase its dread of speech difficulty and its determination to make more effort to talk. The habit is self-intensifying to an appalling degree. One point more is necessary. How does it begin? It begins by a temporary interruption to normal speech. There is no question about this in the cases acquired by imitation. The imitator consciously impedes his normal speech and no serious conse-

quences follow until the fear arises. Some one tells him he is likely to catch it or he remembers an imitator who has caught it or in some other way he is induced to make a voluntary effort to avoid catching it. That fright-impelled effort is misdirected and obstructs normal speech. Somebody laughs or mocks and the chain of misery is begun, probably to end only in the grave, not infrequently self-sought; and in spite of anywhere from half-a-million to a million such cases in the country, the score or more of writers on the subject please themselves by juggling personal opinions that keep up the confusion and its consequent appalling misery. Accidents and incidents also cause the temporary interruption which induces the disorder. A fall, a sickness, a fright will temporarily incapacitate normal speech and then the conscious effort is begun.

If the above conception of stammering is valid it will harmonize all features of Dr. Martin's discussion, sustaining the truths and amending the errors, and the discussion itself will justify the conception, warranting its acceptance by the reader. One thing should be kept in mind, namely, that although the origin of stammering is largely an unavoidable consequence of the peculiarities of the speech faculty, the continuance of stammering is an avoidable consequence of the cruelty of the human race. The stammerer would recover if society did not drive him deeper and deeper into his misery. Society humiliates him if he does not do as normal talkers do: if he does not answer questions, telephone, dictate, introduce friends, exchange greetings—in short, if he does not conform with speech conventions which are made for normal talkers but are inimical to him. He is discharged from work or given inferior work, he is considered queer, he is ridiculed or scorned. In order to avoid this injustice he continues his efforts to talk, not realizing that they constitute the actual trouble; and so he is forced into his impediment, for every convulsive effort induces more and worse efforts.

Possibly one more point will help to a clearer understanding of the disorder, and consequently of Dr. Martin's discussion, and that is the recovery. Notice the word "recovery"—not cure. As we have shown, the stammerer interrupts his normal speech; so necessarily he has normal speech, else he could not interrupt it. Moreover, he uses his normal speech when he is not embarrassed. Most stammerers do far more normal talking than they do stammering. The stammerers who approach muteness are almost invariably those unfortunates whose impediment has been intensified by the prevailing treatments. But every stammerer does some normal talking; and this is the means of recovery, for it instills confidence of speech ability just as the stammering instills doubt of speech ability. The recovery of the girls, a fact as obtrusive as it is avoided, is an illustration of this recovery. Their environment facilitates normal speech and discourages indulgence in stammering; so the fear of speech difficulty wanes to disappearance and normal speech then prevails. A considerable proportion of

male stammerers recover by the same means. Roughly, the time necessary for recovery is proportional to the extent of indulgence in the stammering. A child who has stammered for only a few days will recover quickly if it is not allowed to stammer, but a man who has stammered for most of his life will not entirely recover for several years. He may, of course, be brought to fluency by an artificial environment in which he is relieved of speech responsibility, but years of that fluency are necessary to dissipate totally the memories of past failures.

Now let us take up the statements of Dr. Martin which agree with this conception of stammering taken from his own description.

"Ignorance of this subject is appalling among those who have the care of children." This is perfectly true, and it is also true of most of those who attempt to instruct those who have the care of children. A medical friend whom I interested in the subject set himself to learn about it by reading the medical literature on the subject, and he wrote me that he was perfectly confused by it. That result was practically inevitable, as may be realized from the fact that the three popular theories of the subject, namely, "transient auditory amnesia," "visual asthenia," and Freudianism are each and all fallacious,^{7,8} yet a considerable proportion of the current contributions to the subject are expositions or variations of these theories. The public is not to blame for its ignorance of the subject. The blame rests with those who disseminate the misinformation.

"Physical obstructions of the air passages seldom bear a direct relation to stammering. They may, perhaps, be causal agents through interference with clear enunciation or perfect articulation, but cannot be considered a cause *per se*." This is a clear view in face of the fact that a great proportion of the discussions are to the contrary. Dr. Makuen was a firm believer that nose and throat affections had an etiological relation to stammering, and it was only shortly before his death that he came to the conclusion that "stammering is a psychical rather than a physical disorder." We can readily see that Dr. Martin might have gone further and said that physical obstruction of the air passages has no relation to the disorder. Since the continuing cause is the fear of speech difficulty, the obstruction could not be, or contribute to, the continuing cause; so, if it had any causal relation, it could only be as an inducing cause. But there is no apparent way in which obstructed—partially obstructed—air passages could induce the conscious, misdirected effort of speech. A stammerer may have catarrh. Many stammerers do. But no relation between the two affections has ever been shown, and the nature of the disorder indicates that there is no relation; so it is wrong to allege one.

"Nor does nervousness cause stammering, as commonly supposed." Here, again, Dr. Martin is right, and the subject is important. Although the popular theories hold the field by reason of their novelty, the great resort as a cause of stammering is nervousness.

For lack of a known cause it holds the place in stammering that "heart failure" does in mortality; and it is pleasing to hear an authority speak against it. Most stammerers are nervous. They are pestered beyond the comprehension of a normal speaking person. They are almost never free from planning and scheming to express themselves without stammering. They arrange and rearrange their comings and goings to that end. They construct and reconstruct their conversation, keeping in mind sets of remarks for each expected contingency. But every contingency cannot be foreseen, and, in spite of the prodigious mental effort, stammering is unavoidable. The wretched victim of misapplied convention blushes, sweats, writhes, and inwardly curses the fate that blights almost every feature of his life. Nervous? Yes. Who would not be nervous under the circumstances? But the nervousness is resultant, not causal.

"A common fallacy in attempting to correct a case is to ask the stammerer to take a breath before speaking each word or group of words. The fact that he is made to realize that he must take a breath recalls to his mind his inability to speak as others do. He even recalls the mental pictures of his past suffering and fear predominates to such a degree that all the coordination of nerves controlling speech is temporarily destroyed." This is such a good account of the effect of breathing exercises, namely to intensify the stammering, that one hesitates to correct any portion of it. However, the nerve coordination is not destroyed any more than the coordination of one's optical nerves is destroyed if the sight is obstructed by holding the hand over the eyes. The sight is blocked, but there is no upset in the visual mechanism. And that is true of stammering. The speech mechanism is in perfect order, ready to run, but the voluntary effort blocks the running. Anyone can prove that for himself. Let him hold his mouth open or shut and try to talk at the same time. He will to all appearances be stammering, but his nerves and his cerebrum are in perfect order, as he will find if he desists from the obstructive effort and allows his speech to operate. The grand mistake that practically all the investigators make is to translate the struggle from the peripheral organs to the central organs. Why not see things as they are? Indeed, any but a blind man can see the peripheral struggle, and many investigators—Denhardt among them—show photographs of the contorted muscles. Now be content with that, for a scientific deduction is merely a comprehensible description. But to change the facts and allege an internal struggle is the reverse of science—it is superstition. No valid evidence of an internal struggle has ever been presented, and the disorder is fully accounted for by the external struggle, of course taken in connection with the impelling fright.

Let us return to the breathing exercises. In pre-war days when every German practice was considered worthy of emulation merely from the fact that it was German, the breathing exercises were considered to be the most important feature of practically every

treatment. Specialists and would-be specialists were determined to force the German system of treating stammering into our schools, and in some cases they succeeded. However, Dr. Martin tells us, and tells us truly, that the breathing exercises inculcate stammering. Consider, then, that stammering children in the public schools are being forced deeper into their affliction by treatments advertised to be beneficial but really intensifiers of the disorder. Read the reports of these treatments forced on the stammerers and you will find the breathing exercises still extensively used. But how can they be reported beneficial? For the simple reason that any distraction is a temporary reliever of stammering, and the exercises when new, and especially when practised in a non-embarrassing environment, afford a distraction which brings about temporary fluency, generally advertised as cure. In reality, in the child's natural environment, its efforts to breathe as it is taught, keep its difficulty in mind and thereby increase it. Credit to Dr. Martin for showing the mistake of this treatment and credit to Dr. Liebmann, who since twenty years ago has been a voice crying in the wilderness against it.

Now let us take up the features in which Dr. Martin's article fails to agree with his description of stammering. He says, "It is difficult to discover any cogent reason for stammering, for the original causes may be remote, having left only the effect." That seems to indicate failure to grasp his own description completely. What is difficult about it? A boy cultivates the habit of interfering with his normal speech, and fearing to contract the disorder, persists in interfering, not realizing that he is blocking his speech with every voluntary effort. Each effort increases his impression of speech disability, so the disorder grows on him. The course of events is perfectly logical and perfectly in accord with the observed and frequently recorded facts. Stammering is no longer a mystery.

"In the correction of speech defects it must always be remembered that each case must be solved as a personal equation." This belief was formerly fairly extensive from the fact that no two stammerers feared the same group of sounds, but since the appearance of Freudianism we hear it proclaimed by nearly every authority. In fact, there is no real basis for it. The stammerer fears the sounds with which he has had trouble, and these have some tendency to become stereotyped, for he will make further effort to avoid difficulty with them and thereby will continue the difficulty. But the course of recovery is identical with every stammerer, namely to "cut out" the stammering and to cultivate the fluent talking.

"The teacher is kindest who makes him prove that he can speak—when she forces him to overcome the handicaps of the class room." This is refuted by almost universal testimony and by the nature of the disorder. Rudolf Denhardt's testimony is convincing. He says, "For many stammering children the entrance in school inaugurates a significant period in the development of their impediment in which spring up

new and grave dangers. The increased demands which the lessons place on their speech, the apprehension of making an exposure of their impediment before their comrades and becoming a welcome prey to ridicule; the anxiety regarding the opinion of the teacher; the not always appropriate treatment of the stammerers by the teacher; the realization coming first on the school bench with full force, of reduction in grade through no fault of their own, below others of no more ability—all this combines to engender in the soul of the stammerer every feeling which contributes to the increase of his impediment." Evidently Denhardt does not find the conventional school treatment the kindest thing to the stammerer, and Denhardt gives his reasons instead of making a dogmatic statement. Albert Gutzmann says, "The school conditions—or similar ones elsewhere—call out the feelings of anxiety and shame and the impediment wins the mastery over the individual."¹⁰ H. Gutzmann says, "Anxiety in the presence of the teacher, shame in the presence of the school children increase the trouble extraordinarily, and that in a very short time."¹¹ Dr. Wile says "Under ordinary circumstances the very act of recitation increases and tends to protract the disability."¹² I could fill a page of the *Medical Record* with such testimony from records at hand, and am confident that I could fill a whole number with a little research. But what is the use of multiplying evidence of what is evident? We have already shown that the custom of forcing the stammerer to talk is responsible for the continuance of the disorder. If he was allowed to take his time or not to talk at all when tired, ill, or discouraged, the fluent periods would remove the fear of disability and he would recover. He is constantly scheming to avoid stammering, but society as constantly forces him into it. Here in our supposed-to-be enlightened and Christian land we are forcing three hundred thousand stammerers into lives of misery in our public schools, and although the Commissioner of Education has repeatedly had the fact brought to his attention, he declines to use his influence to stop it.¹³

"In my treatments I use a series of vocal gymnastics which I have carefully developed. The faithful practice of these exercises will not only intensify the auditory images of the stammerer. . . ." In "auditory images" we find the "auditory amnesia theory" cropping up again. It is hydra-headed. Whether or not these exercises intensify the auditory image is immaterial. Stammering is independent of the auditory image. The big question is, "Are the vocal gymnastics beneficial?" Dr. Liebmann says they are injurious, and he eschewed them along with the breathing exercises years ago. What is the effect of the exercises? Dr. Martin tells us that they have the effect of "focusing the attention upon direct control of the muscles employed." But that is the stammerer's trouble—conscious effort at speech; and just what it is necessary to avoid. Dr. Martin recognizes such necessity for avoiding the breathing exercises, but he fails to see that it is equally true of the vocal exer-

cises. Let us pause a minute and take a broad view of the situation.

Why were breathing exercises and vocal exercises ever used? For the simple reason that it was thought the stammerer needed to be taught how to breathe and how to talk; our predecessors thought that the stammerer was deficient in these two functions. What was the result? It was temporary improvement and generally ultimate intensification of the disorder. Oh, I know, for I went through it—many times. A few, whose environment is favorable, may progress to recovery, *in spite* of the treatments. The proportion of recoveries, and after years of time, is variously put at from 1 per cent. to 10 per cent. Of the many cures which I attended I do not know of one recovery at the cure, and I do know that most of the attendants continued to stammer worse than when they originally took the cure, and after repeated treatments. What is the situation now? It is that we are very slowly coming to realize—what was always evident—that the stammerer's breathing and speaking are all right when he ceases to interfere with them. Leave him alone and he talks to himself fluently, hypnotize him and tell him that he is an orator and he orates, elate him and he is fluent, enrage him to the extent that he forgets his idea of speech disability and he will express his feelings without a hitch. He knows how to breathe and to talk, and, what is more, he knows these things better than anyone can teach him. His trouble is that he interferes with his speech by conscious speech efforts, and the exercises encourage him to do it more so. It is much to Dr. Martin's credit that he has spoken up regarding the intensifying effect of the breathing exercises; but he has still another step to take, which is to put the vocal exercises in the same class.

In closing it might be well to outline what should be done with stammering. Certainly we should cease from intensifying it. The public schools are the big factor in the continuation of the disorder, not only by making the stammerer worse but by favoring the contagion. The stammering child should be allowed to write his recitations and should be forbidden to stammer on school property. This one reform would within a few decades extirpate the disorder, for even severe stammerers would recover during the ten years of schooling. However, a five-year intensive campaign for the extirpation of stammering shows such a reform to be unpopular. The cure is wanted. "Give us the cure." Let me outline that again. To begin with, except at the very inception of the disorder there is no recovery sufficiently quick to warrant the name cure. Tell me how to destroy memory of speech difficulty without deleterious results and I will tell you a quick cure for stammering—otherwise not. One who long walks the path of the stammerer has a long walk back—not necessarily as long as the walk in, for a favorable environment may produce fairly rapid results. The means of recovery is the reverse of the means of cultivation of the disorder. The fear of speech difficulty was built up of repeated speech

failures, and that fear can be removed only by repeated speech successes, and, of course, by desistence from further failure. First, the environment which conduces to fluency must be provided, such as freedom from speech responsibility, from embarrassment, weariness, and anything of a depressing nature. Hygiene is beneficial in that it contributes to buoyancy, and that contributes to fluency. Every stammerer should always carry a pad and pencil and the determination to use them rather than stammer, for without the latter they are useless. He should have congenial company, preferably one companion at a time, and should be kept talking, fluently. At first his remarks will be short, for he can not say many words without remembering trouble with a coming one and making trouble when it arrives. Thereupon he should check himself, or be checked, and should do anything but stammer. He may "let it go," he may write it, he may use a synonym; but in any case he should avoid stammering. There is no valid reason why the institutions now treating stammering by methods which intensify the disorder should not treat it by this rational and beneficial method. The environment is there, and the associates are there, for two stammerers will often converse with comparative fluency on account of the bond of sympathy between them. Recovery will not ensue at the treatment unless the stammerer makes a long residence there. Apparent recovery, that is, complete fluency, may occur, just as it does with the present treatments; but the underlying fear will still be there, just as it is with the present treatment, ready to spring into full strength with a few speech failures. Complete subjugation of it is possible only by consistent maintenance of the regimen. Dr. Kenyon is right in saying that real recovery must occur in the stammerer's natural environment.¹⁵ He must learn to keep the fear in subjugation there before he is master of his speech. The temporary uplift and the proper course of procedure may be obtained at the treatment, but the ultimate recovery must be patiently worked out under the circumstances in which the stammerer lives.

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174 South Bonnie Avenue.

—*Medical Record*.

Correspondence

LAY MEDICINE

Woodstock, Illinois,
November 14, 1921.

To The Editor: What happens when heads of social societies are given too much freedom in medical matters? Just an example of what happens when community nurses and heads of social improvement societies are given too much freedom in medical matters:

"BEWARE OF PINT, CAUTIONS CORONER

"In Mrs. Mary B. Dalbey's very able monograph in yesterday's Sentinel on the treatment of colds we find the following advice:

Citrate of Magnesia is a pleasant cathartic which tastes like lemonade. Children like it. The dose is a pint bottle."

"Above advice might lead some parents to administer this generous dose to a child of tender years. The results would be tremendous if not disastrous and very likely a coroner's jury would write the grand finale of the tragedy.

"After all it is good policy to have the milliner make your bonnet, let the plumber do your plumbing and get advice from a doctor in case of sickness.

"E. WINDMUELLER."

The Mrs. Dalby in question is not a nurse but just an average lay woman who pulls down a snug salary as head of the McHenry County Home Bureau.

She gives advice on anything from dietetics to the scientific care of the family bull.

Of late she has appeared in print in the county papers writing extensive monographs on the etiology, diagnosis and treatment of disease. When I had a chance I "called" her.

Sincerely,

E. WINDMUELLER.

SEVERAL OF OUR OPPONENTS PROFESS CONVERSION TO OUR CAUSE

PROFESSIONAL GUILD OF NEW JERSEY GETS RESULTS

Newark, N. J., Oct. 26, 1921.

To the Editor: Our professional Guild in Union County, under the leadership of the physicians, defeated for re-nomination at the primary, assemblyman Sidney W. Eldridge, who at the last session of the legislature tried to block our bill dealing with the Chiropractic situation,

which later became a law, despite his opposition. As chairman of a special committee of the assembly he drafted Osteopathic and Chiropractic substitutes which favored both of these groups. The substitutes were beaten as our Bill went to victory.

To show how effective the Guild campaign was, Eldridge ran fourth in the primary, seventy-five votes behind a third man (three were nominated) and 5,000 behind the first man who led the ticket. In previous years, Eldridge, who was popular in his County, always led his ticket both in the primaries and on election day.

An assemblyman named Downs of Morris, a pal of Eldridge's, and a member of that special legislative committee, who tried to ditch our bill and advance the others, was pulled out of the assembly race by the political leaders in his county. The third man, Patterson of Hudson, we will defeat on election day.

Tozer of Bergen, who opposed our measures while supporting the Chiros. and Osteopaths, was beaten at the primaries, largely through our efforts.

We have kept up our organization work and educational campaign among the Doctors, and in checking up our candidates, we feel safe that no inimical legislation will pass at Trenton this Winter. We have had several of our opponents in the legislature profess conversion to our cause. We will add another Doctor to the Senate roster on election day.

We will have a fight on our hands with the Osteopaths at the legislature, as they are going to seek the right to prescribe drugs and perform surgical operations without meeting the qualifications and standards that the M. D.'s are required to meet.

We are told that the Chiros. will try for a bill to place their case before the people on referendum. Our welfare committee will probably have a bill from our viewpoint handling the Osteopathic situation setting forth how far they can go as Osteopaths in prescribing drugs and performing surgical operations.

JOSEPH H. GUNN,

Executive Secretary.

NOTE: The doctors of Illinois should take cognizance of the work accomplished by the Doctors of Union County, New Jersey. What can be accomplished in New Jersey can be dupli-

cated in any County in Illinois. We have several members of the Illinois legislature that should be retired, likewise we have some men in the National Congress that should be relegated to the dump heap at the next election. Men who are advocating Russian Soviet Government schemes such as Madam Kolantai's Russian system of Maternity which Professor Sokoloff the distinguished Russian characterizes "as a crime which knows no parallel in the history of the world" and which it is claimed has destroyed morally as well as physically a whole Russian generation. Sir Paul Duke says that the central tragedy of Russia today is the result of Bolshevik corruption under Madam Kolantai's "Welfare" and "Maternity" system.

A NEEDED AMENDMENT TO THE COPYRIGHT LAW

St. Louis, Mo., Oct. 28, 1921.

To The Editor: Our present copyright law, containing many excellent features, was approved March 4, 1909, and went into effect July 1, 1909. It has been amended three times: March 2, 1913, March 28, 1914, and Dec. 18, 1919. The law has one defect, viz., *it does not prohibit the printing of a date on the title-page different from that of the copyright.*

Section 19 of the original Act says: "That the notice of copyright shall be applied, in the case of a book or other printed publication, upon its title-page or the page immediately following," etc.

Owing to the loop-hole mentioned above, a few unscrupulous publishers of medical and other books are able to deceive the purchaser. The busy physician looks at the title-page, notes the date, turns over a few pages hurriedly, glances at the illustrations, and (rarely) examines the index—and orders the book. Unless he knows the date of copyright, he knows not the date of the printing of the book.

The present law should be amended so that, if the title-page bears a date it must be an honest one, viz., that of the year of the granting of the copyright.

The writer has called the attention of the Honorable Selden P. Spencer, junior United States Senator from Missouri, to this matter, and has received assurance that he will introduce the proposed amendment. While it might

be feasible to secure the adoption of the proposed amendment solely on the justice and merits of the question, it would appear advisable that the proposed measure should have the support of the organized medical profession.

Sincerely,

JAMES MOORES BALL, M. D.

CHRISTIAN HOME ORPHANAGE SEEKS ASSISTANCE

Council Bluffs, Ia., Nov. 12, 1921.

To the Editor: The close times and increased population have dealt the Christian Home Orphanage of Council Bluffs, Iowa, a heavy blow. This institution cares for an average of 250 little children daily. It also conducts a department for aged, dependent women, and a department for deformed and crippled children. The institution was founded in 1882, and since that time has provided for an average of 500 homeless people annually. The institution is at present struggling under a heavy debt, and with winter at hand, and calls from the needy rapidly increasing, efforts are being made to wipe out the debt by a Thanksgiving offering. This institution is the only home that hundreds of destitute children and aged women know. The Home is supported entirely by voluntary contributions of charitable people. It receives children from any part of the country, employs no traveling agents and is absolutely non-sectarian. This great institution sorely needs your help now. Send them a Thanksgiving donation and help them pay off the old debt and care for many hundreds who will seek food and shelter there this winter. Address, The Christian Home Orphanage, Council Bluffs, Iowa.

Public Health

DECLINE IN TUBERCULOSIS DEATH RATE

According to the records of the State Department of Public Health, mortality from tuberculosis in Illinois has declined almost 35 per cent during the past four years. In the fiscal year of 1917-1918 there were 8,402 deaths from all forms of tuberculosis, while during the year that ended June 30, 1921, there were only 5,594 deaths from these causes. This corresponds to an actual reduction of 2,808 deaths or an average decrease of nearly two deaths per day during the four-year period. On the basis of deaths per 100,000 population the mortality has decreased from 133.9 in 1917-

1918 to 85.1 in 1920-1921. The work in Cook County, where a little less than half the population of the state resides, is responsible in no small measure for the success of the anti-tuberculosis campaign. In that county the reduction in the number of deaths from tuberculosis for the four-year period under consideration was 1,797 while that for the remainder of the state was 1,011. It will be seen, therefore that considerably more than half of the reduction in the state tuberculosis mortality rate has been accomplished in Cook County.

Book Reviews

MEDICAL CLINICS OF NORTH AMERICA. September, 1921. Volume 5. Number 2. Published bi-monthly. W. B. Saunders Company. Philadelphia and London. Price per year \$12.00.

This is the Mayo-Clinic number. The work is up to the usual high standard. It gives a report of the clinics of Drs. Benedict, Barlow, Lemon and Barnes, Carman, Plummer and Vinson, Willius, Eusterman, Burkman, Buie, Boothby and Sandiford, Roundtree, Wilder, Bumpus, Jr., Stacy and Joseph, Shelden, Stokes, Woltman, Fitz, Sanford, Magath and Rose-now.

DISEASES OF THE DIGESTIVE ORGANS, DIAGNOSIS AND TREATMENT. By Charles D. Aaron, M. D., Third Edition, thoroughly Revised. Illustrated with 164 engravings, 48 roentgenograms and 13 colored plates. Lea & Febiger. Philadelphia and New York. 1921. Price \$10.00.

The subject of gastroenterology is receiving a great deal of attention at the present time. This work meets a long felt want. The work shows the readiness and accuracy with which diseases of the digestive organs may be diagnosed and the prospect of a recovery therefrom very materially enhanced. Much new material has been incorporated in this edition, bringing the subject strictly up-to-date.

BACTERIOLOGY: GENERAL, PATHOLOGICAL AND INTESTINAL. By Arthur Isaac Kendall. Second Edition. Thoroughly Revised. Illustrated with 99 engravings and 8 plates. Lea & Febiger. Philadelphia and New York. 1921. Price \$6.00.

As a result of the great war there has been much advance in the science of bacteriology. In recent years there has been much improvement in the methods of investigation and in modifications of pre-existing views in the important field of infection and prevention of many diseases. The author has kept in touch with the changing conditions and this work brings the subject strictly up to date. This necessitated the re-writing of entire sections of this book and extensive changes and additions to nearly every chapter.

THE GLANDS REGULATING PERSONALITY. By Louis Berman, M. D. The MacMillan Company. New York. 1921.

This is an interesting volume divided into XIII chapters, showing how the glands of internal secretion were discovered, describing the glands, thyroid and pituitary, adrenal gonads and thymus; the glands as an interlocking directorate—how they influence the normal body—the mechanics of the masculine and feminine; the rhythms of sex, how they influence the mind; the backgrounds of personality; the types of personality; some historic personages; applications and possibilities the effect upon human evolution.

THE LIFE OF JACOB HENLE. By Victor Robinson, M. D. Medical Life Company. New York. 1921. Price \$3.00.

This is the first biography in the English language of one of the makers of modern medicine—and also one of the most human and humorous figures. His inimitable letters are among the wisest and wittiest in all medical literature. His career was so romantic that it was utilized by both novelists and dramatists.

In presenting this work the author feels that every physician should be familiar with the man who bequeathed to us the true knowledge of epithelium, the rational outlook upon pathology, the germ theory on which we have built the corner stone of modern medicine. The edition is limited to 500 copies, of which 400 is offered for sale.

1920 COLLECTED PAPERS OF THE MAYO CLINIC. Rochester Minn. Octavo of 1392 pages, 446 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, \$12.00 net.

This is the twelfth volume. It is up to the high standard of the previous editions. It has many papers on each of the following: alimentary tract; urogenital organs; ductless glands; heart; blood; skin and syphilis; head, trunk and extremities; nerves; technic general.

DISEASES OF THE SKIN. By Henry W. Stelwagon, M. D. Ninth Edition revised with the assistance of Henry K. Gaskill, M. D., attending Dermatologist to the Philadelphia General Hospital. 1313 pages with 401 Text Illustrations and Half-tone Plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$10.00 net.

The fact that this work has run through nine revisions speaks volumes in its favor. Much that was superfluous in previous work has been eliminated, much new material has been incorporated in this edition particularly information relative to Acrodermatitis Hiemalis, Endothelioma, Espudia, Keratolysis, Exfoliativa, Amebiasis Cutis, and Folliculitis Ulery-thematosa Reticulata.

SURGICAL ANATOMY. By William Francis Campbell, M. D., Surgeon-in-Chief at Trinity Hospital, Brooklyn, N. Y.; Sometime Professor of Anatomy and Professor of Surgery Island College Hospital. Third edition, revised. 681 pages with 325 original illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth \$6.00 net.

The purpose of this book is to aid the student and practitioner in mastering the essentials of practical anatomy. No teacher can impart, or student assimilate all the details of anatomy. The facts must be sifted, their comparative values fixed, and the reason for their acquisition demonstrated by directing attention to the practical problems with which they are associated. This work meets the requirements. It should be in possession of every surgeon and student of anatomy.

HISTORY OF MEDICINE, WITH MEDICAL CHRONOLOGY, SUGGESTIONS FOR STUDY AND BIBLIOGRAPHIC DATA. By Fielding H. Garrison, M. D., Lt.-Colonel, Medical Corps, U. S. Army, Surgeon General's Office, Washington, D. C. Third edition, revised and enlarged. Octavo of 942 pages with 257 portraits. W. B. Saunders Company, Philadelphia and London, 1921. Cloth, \$9.00 net.

This work is very valuable. It fills a much needed void in that it brings the subject of medical history up to date. In this work a careful account has been rendered of the newer findings of Sudhoff, Neuburger, Wickersheimer, Singer and other European investigators of ancient and midieval medicine. Much is told of Chinese medicine on the history of Pediatrics, Dentistry, Public Hygiene, Military Medicine and Medical Lexicography; on the earlier nuclei of medical education in the United States; on recent Japanese, Spanish and Latin American Medicine, etc.

THE SPLEEN AND SOME OF ITS DISEASES. By Sir Berkeley Moynihan, of Leeds, England. 129 pages with 13 full page diagrams, Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.00 net.

Surgery of the Spleen has hitherto enjoyed only a very restricted field. In recent years the part played by the Spleen in diseases has been recognized and an extension of surgical treatment to cases of Cirrhosis of the Liver, Pernicious Anaemia, Haemolytic Jaundice, etc., has taken place.

Society Proceedings

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, November 2, 1921

1. Ex-Service Cardiopath.....Joseph M. Patton
Discussion.....Jos. A. Capps, Frederick Tice
2. Subphrenic Abscess. Lantern Slides.....
.....J. N. Hall, Denver, Colo
Discussion.....Frederick G. Dyas, Karl Meyer

Joint Meeting of Chicago Medical and Chicago Laryngological and Otological Societies, November 9, 1921

1. Problems of the Deaf. By Invitation.....
.....M. A. Goldstein, St. Louis, Mo.
2. Problems of the Hard of Hearing and the Use of Electrical Hearing Devices..Geo. E. Shambaugh

3. Community Organization for the Deafened....

Miss Valeria D. McDermott, Executive Secretary, Chicago League for the Hard of Hearing
Discussions to be opened by Miss Mary McCowan, first teacher of the deaf in Chicago; Dr. Frank G. Brunner, Director of Special Education, Public Schools of Chicago; Miss Gertrude Torrey, Principal of Chicago School of Lip Reading; Drs. Norval H. Pierce, Joseph C. Beck, J. Gordon Wilson.

Regular Meeting, November 16, 1921

1. The Determination of Dental Focal Infections by Means of the Radiogram.....M. J. Hubeny
Discussion...Eugene Talbot, Sr., Frederick Molt
2. The Psychic Element in Medical and Surgical Practice.Jos. Rilus Eastman, Indianapolis, Ind.
Discussion.....
.....Julius Grinker, Emil Ries, Chas. L. Mix

Regular Meeting, November 23, 1921

- Immunization Against Diphtheria by Means of Toxin-Antitoxin...Abraham Zingher, Ass't Director, Bureau of Laboratories, New York, N. Y.
Discussion.....Isaac A. Abt, Clifford G. Grulee, Julius H. Hess, John Dill Robertson

Regular Meeting, November 30, 1921

1. When is the Simple Mastoid Operation Indicated in the Treatment of Acute Mastoiditis?.....
.....C. F. Yerger
Discussion.....
....Norval H. Pierce, George E. Shambaugh
2. New Methods of Cesarean Section..Jos. B. DeLee
Discussion.....D. S. Hillis, W. C. Danforth
3. An Analysis of "Christian Science" from a Medical Standpoint.....Edmund Jacobson
Discussion...Harold N. Moyer, Ralph C. Hamill

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otological Society was held on Monday evening, February 7, 1921, at the Palmer House, at eight o'clock.

The President, Dr. Alfred Lewy, in the Chair.

DEMONSTRATION OF CASES AND INSTRUMENTS:

Dr. George M. McBean presented a patient with a swelling in the right side of the soft palate. There was no complication of any kind, no pain and no history was obtainable. The patient was in the army a couple of years ago and at that time was told he had a large right tonsil. Dr. McBean had put a needle unto the growth recently but obtained no fluid. He believes it to be a fibroma of the soft palate.

DISCUSSION

Dr. George E. Shambaugh said the situation did not look unlike a type of large tonsil which one occasionally encounters, in which the enlargement is for the most part upward between the folds of the soft palate. The enlargement was more exaggerated in this case than he has ever seen from a tonsil.

He recalled a case where this type of enlargement of the tonsil existed on both sides in a patient who suffered a great deal because of frequent attacks of acute tonsillitis. Tonsils were removed under local anesthesia. The operation was followed by more or less paralysis of the soft palate resembling the situation observed after diphtheria. The annoyance from fluid getting up into the nose when the patient attempted to swallow persisted a number of weeks but the end results were entirely satisfactory.

Dr. Joseph C. Beck was reminded of two cases, one of which proved to be a calculus (amigdyolith). The case presented much the same appearance as Dr. McBean's, but upon opening the supratonsillar fossa he found a mass larger than a small hazelnut, which was made up of a concretion like a stone.

The second case, seen about two weeks previously, was referred to them as a sarcoma and had a growth coming over from the posterior lateral wall. Upon exposing the tumor for microscopic examination they found a definite capsule. A piece of the capsule was excised and found to be quite dense below which there was a soft tissue and upon sectioning the tissue it was found to be lipomatous.

Dr. Samuel Salinger presented a pathological specimen from a case of extradural abscess and extensive sinus thrombosis. They had removed a large clot extending from the knee to the bulb and tied the jugular. The boy got along well for a week, but the jugular wound became infected with what proved to be a diphtheroid organism. On the tenth day the dressings over the neck wound were found to be saturated with blood. The patient was put on the operating table and removal of the dressing was followed by an enormous gush of blood. The common carotid was tied but the patient expired shortly afterward. The specimen presented showed an erosion of the common carotid from without about the size of a small pea. Dr. Salinger was not sure whether the rupture was due to infection, to the rubbing of the ligature on the artery, or whether Dakin's solution with which the wound had been irrigated had anything to do with it.

DISCUSSION

Dr. Holinger said that in a paper which he had read some time ago on sinus thrombosis he mentioned a case from the literature of erosion of the carotid followed by fatal hemorrhage, caused by the ligature around the jugular vein. The pulsation of the carotid caused the friction.

Dr. Joseph C. Beck did not agree with Dr. Holinger as to the cause of the rupture. He had seen a similar rupture in a case of suspected carcinoma, which, however, was healed out Bezold abscess. In that case they made a complete dissection of the common carotid, both external and internal, and the jugular vein. These were protected with dressings and the next day upon dressing the patient, who was a physician, they found an enormous bullae formation over the side of the neck. Upon puncturing these bullae they found a pure culture of a diplococcus. The wound was left exposed for subsequent x-ray treatment and in four or five days they found a small, white spot on the external portion of the carotid artery. The next day it was slightly larger, with a little bulging, and on the sixth or seventh day they were compelled to do a temporary compression of the common carotid, thinking that by reducing the amount of blood going through they would get a granulation of the wall of the artery. On the same day Dr. Pollock was called in a hurry because the patient had a sudden gush of blood from the neck wound and he succeeded in grasping the bleeding point with a pair of artery forceps. In the afternoon they made a complete ligation with tape and were able to take off the artery forcep, as there was no bleeding. The patient developed a hemiplegia during the night and died two or three days later. They should not have made the dissection, but the case was sent in as carcinoma.

Subsequent examination showed that it was simply inflammatory, and the patient had carried the infection around for years.

In his opinion the case reported by Dr. Salinger was a similar one, the organism producing an arteritis from the exterior and causing a rupture. If it had been exposed earlier and tied they might have been able to save the patient.

Dr. Salinger (closing the discussion) said he did not think the ligature had eroded the artery by friction in this case. The erosion was not directly opposite the ligature and in his opinion it was due rather to infection from the exterior. He had seen one case where carcinoma had eroded the common carotid, and another case similar to the one reported by Dr. Beck, but this was the first case of this kind that had come to his notice.

Dr. George W. Boot reported the case of a small boy who had been left in his father's care and was taken with a severe coughing spell. The father did not know what the child had inhaled but supposed it was a bead, as a broken string of beads varying in size was found. Roentgen examination showed nothing, as the bead was transparent to X-rays. Upon listening to the child's chest the bead could be heard flying up and down the trachea with each inspiration and expiration. Dr. Boot did upper bronchoscopy and tried to get the bead, but the forceps would not hold it and in the effort to grasp it the bead was pushed into the left bronchus where it was firmly lodged. It was smooth and hard and forceps always slipped off. A probe could not be insinuated past it. He finally evolved the instrument which he presented for inspection. The problem was to have an instrument small enough to pass through a small bronchoscopic tube and yet permit enough light to pass so that the instrument could be passed into the hole in the bead under direct visual guidance and at the same time hold firmly enough to dislodge the bead. With this little appliance which V. Mueller and Co. made for him he was able to remove the bead.

Dr. Clark W. Hawley (by invitation) presented a paper entitled "Abnormalities of the Mastoid in Reference to the Facial Nerve," and exhibited specimens of the temporal bone showing anomalies of the nerve.

A number of specimens were shown showing the abnormal position of the lateral sinus.

Also two specimens where the facial nerve passed down the center of the mastoid bone instead of in the base of the posterior wall of the ear. The nerves were situated in the path of operation and would be injured unless the operator was on the lookout for the malposition. Such abnormalities may account for some of the facial paralyses that occur. The knowledge of their occurrence will be useful to the expert witness in malpractice cases.

DISCUSSION

Dr. George E. Shambaugh stated that it was not easy to judge of the exact relation of the facial nerve to the surrounding parts by a dissection of this sort that works in from the surface. Students who are attempting to visualize the anatomical relations of the temporal bone do not accomplish this successfully by performing the operation on the mastoid and observing the relations as they are uncovered in the course of this procedure. The reason for this is that one important relation after another is destroyed in making an opening into the mastoid. It is necessary to make a series of anatomical sections, each one devised to bring out an important anatomical relation in order to study definitely the exact relation of the

facial nerve as it courses through the temporal bone. The best type of preparation is made by a section which passes through the tympanum in the perpendicular plane and lays open the facial canal from the point where it turns downward just in front of the horizontal semi-circular canal until it leaves the stylo-mastoid opening. A section made in this way leaves no chance for deception in measuring the relation of the facial canal. The impression Dr. Shambaugh gathered from an examination of the preparations presented was that the facial nerve was entirely in its normal position. He has seen only one anomalous variation in the course of the facial nerve. This was in the preparation, exhibited by Dr. Behrens.

There are several facts in connection with the course of the facial nerve that should always be kept in mind when operating on the temporal bone: First, that the nerve enters the tympanum in front and above the oval window. Second, the relation which the nerve bears to the posterior wall of the exterior auditory meatus. This relation at the upper part of the tympanum is quite different from what it is at the floor of the tympanum. In the former location the nerve lies close to the posterior wall of the tympanum and on a level with the inner wall of this cavity. As the nerve runs downward toward the stylo-mastoid opening, two alterations take place in relation to the tympanum. The first is, that it lies farther and farther away from the posterior wall of this cavity until it reaches the floor of the tympanum. At this point, it is separated usually by $\frac{1}{4}$ inch from the tympanum cavity. The second alteration is, that as the canal extends downward from the knee instead of lying at a depth parallel with the inner wall of the tympanum it extends out farther and farther along the post-meatal wall. This latter fact has been responsible for injury to the facial nerve when operators have attempted to flatten out the posterior wall of the meatus.

Dr. Joseph C. Beck stated that his purpose in asking Dr. Hawley to present this subject before the Society was that thus far there was only the one specimen, to which Dr. Shambaugh had referred, and it occurred to him that if it could occur once it might occur again, and this case of Dr. Hawley's was probably one of those cases. When Dr. Hawley showed Dr. Beck the specimens he had the same impression that Dr. Shambaugh had. When one considered Cheatles collection of temporal bones and remembered that in not a single case was there a repetition of the specimen shown by Dr. Behrens, one realized that the course of the facial nerve was very definite and constant and in the course of an ordinary mastoid operation this injury does not occur.

Dr. Beck added one point to those brought out by Dr. Shambaugh: That the facial nerve does not extend external to the prominence of the horizontal semicircular canal, and if one keeps external to that when taking off the posterior lower wall there will not be much trouble.

Dr. Hawley had not yet proven the point that he made when he showed the same specimens at the Illinois State meeting.

Dr. J. Holinger said the abnormal course of the facial nerve is especially dangerous in cases of Bezold's mastoiditis.

Dr. George W. Boot agreed with Dr. Shambaugh that the upper part of the nerve was very definite in its course. The lower part always emerges at the stylo-mastoid foramen. At birth the nerve emerges on the outer surface of the temporal bone for the mastoid apophysis has not yet formed. The reason the course of the nerve seems to vary is because of the varying amount of development of the mastoid apophysis. Its relation to the drum membrane and middle ear is quite constant.

Dr. Clark W. Hawley believed that if Dr. Shambaugh had carefully examined the specimens he would have recognized that the nerve in the specimen, which had not been disturbed at all, was not in the posterior wall but ran down almost exactly on the center of the canal. In the one it was two-thirds away from the posterior wall of the ear. He had made 300 dissections and had never found other cases like these. He had found one or two instances where the facial nerve did not travel as Dr. Shambaugh had said

and anyone who attempted to scrape away granulations from the mastoid antrum would have injured the nerve, for it traveled along the upper portion of the middle ear. In the specimens both posterior walls were preserved and the mastoid tip was not disturbed at all. Dr. Hawley thought that if these nerves were not displaced he would certainly have found the same position in many of the other operations done on the cadaver.

Dr. Howard C. Ballenger read a paper on "Acute Hemorrhagic Otitis Media."

(Abstract.)

Altogether in a period of about three weeks with a few cases preceding and following this period, he saw about fifty-six cases (a total of 72 ears) of various degrees of severity of this so-called hemorrhagic otitis media. In only two cases was the simple mastoid operation necessary.

The onset was fairly sudden with pain and temperature usually from 100°-103°. The eardrum became red and bulging quite early. The shortest time from a normal to a red bulging drum, which he witnessed, was two hours. In all these cases, with the exception of perhaps half a dozen, he was able to do an early paracentesis before rupture occurred. In 75% of these cases, following the paracentesis, there was a sudden rise of temperature, usually in children to 103°. In many cases to 104° and in a few to 105°. In very few of these cases did the paracentesis relieve the head pain. They would complain of a throbbing or aching head; would not tolerate the twisting or undue motion of the head. The tenderness on pressure over the mastoid and vicinity was very marked in the more typical cases. Traction on the pinna also caused pain. As a rule this pain subsided in from three to seven days. A few cases had it for two or three weeks.

The most striking feature following the paracentesis was the profuse bleeding, which usually persisted for two to seven days gradually changing to a pink serous discharge. In one case the bloody serum persisted for two weeks. As a rule this discharge appeared to be without trace of pus which could be discerned with the naked eye, but a typical pus discharge would eventually occur. In most of these cases the bloody serum could be seen pumping through the incision synchronous with the heart beat. The canal could be cleaned out and would fill almost immediately. In the more marked cases pads of cotton would have to be kept over the ear to take up this excessive discharge and in some cases it was necessary to change the pad every half hour.

The examination of the canal and eardrum did not reveal a typical sinking down of the posterior superior canal wall in any case of this series. Only one patient showed a swelling behind the ear and that for one night only.

In his opinion surgical interference during the early stages is a mistake, due primarily to a non-clotting in the small vessels with the resultant danger of the infection being transmitted to the meninges, the sinus, or directly into the blood stream. In fact, in many cases he believed that doing a paracentesis is sufficient to create an avenue of entrance into the blood stream

as the profound symptoms could be explained satisfactorily in no other way. The two cases that came to operation were both operated some weeks following the onset, after all symptoms had subsided with the exception of the persistent otorrhoea. Both cases made a very rapid recovery and were left with dry ears and normal hearing.

All of the cases in his group have dry ears and normal hearing at present. A few cases of this type which were operated early of which he had indirect knowledge had many alarming complications, two cases developing multiple abscesses.

Conclusions.

He believed an early and free paracentesis is indicated, despite the subsequent rise in temperature and the hemorrhages.

DISCUSSION

A minimum amount of interference during the bloody serous stage, whether swabbing or subsequent enlargement of the eardrum, should be attempted.

The time of election for operation should be after the ear has quieted down and it is done for a persistent otorrhoea.

Dr. George W. Boot stated that when he saw the child whose case was reported by Dr. Ballenger, Dr. Ballenger favored operation while Dr. Boot opposed it. The following day he reluctantly gave his consent and had the child sent to the hospital because Dr. Ballenger could not be reached. Before the time set for the operation the child apparently had improved so no operation was done and the patient was returned to Dr. Ballenger's care. Dr. Boot had operated on a man of 80 who had chronic interstitial nephritis under local anesthesia because of a streptococcus infection. The mastoid cells were found filled with clotted blood. Unfortunately the patient developed facial erysipelas on the side of the wound. This cleared up only to be followed by erysipelas on the opposite side and this in turn by erysipelas of the leg with multiple abscess formation and the patient finally died of this infection.

Dr. Samuel Salinger thought it would be interesting to know in what condition the mastoid cells were found,—whether there was a hemorrhagic mastoiditis as well, and also the condition of the bone.

Dr. Harry L. Pollock said that during the epidemic last year they had several cases in which there was bleeding from the ear. On close inspection with the otoscope the swelling and redness of the membrane appeared in the form of a blister. They had severe pain and temperature and in opening these blisters they got a bloody exudate which persisted for several days. In none of the cases did they find it necessary to do any mastoid operation or paracentesis. Several of the cases looked like a mastoiditis, but after a few days the symptoms subsided very rapidly. One lady who had excruciating pain for 24 hours had complete relief when the little bleb ruptured, but the discharge continued. Had they performed a paracentesis they might have set up an otitis media.

Dr. Pollock pointed out that Dr. Ballenger had not mentioned the X-Ray picture. If X-Ray pictures were taken in these cases no mastoid involvement would have been shown.

As to indications for operating on the mastoid, the principal one was the hearing and in these cases the hearing was not so markedly affected as it was in the mastoid with involvement of the middle ear and recovered very quickly. In the otitis media cases if the picture showed the mastoid to be cloudy, and they waited several days and then took another in order to see whether the condition was breaking down or clearing up, was one indication. If the hearing con-

tinued to grow less acute it was an indication to do a mastoid operation. In their cases all the organisms found were streptococci.

Dr. J. Holinger drew attention to the fact that hemorrhagic nephritis was caused repeatedly by instillation of carbolated glycerin into the ear, and asked whether any was used in Dr. Ballenger's case.

Dr. Harry Kahn said the subject is discussed in Pollitzer's book rather fully. The whispered voice test is a differential test between a myringitis and an abscess of the middle ear. In the epidemic last year many of these cases of sudden onset ruptured in a short time and hemorrhage from the ear was met with in many of the cases. He thought that this was nothing unusual in an influenzal epidemic, and that nothing new had been brought out. So far as he knew all the cases were of streptococcal origin and were probably entirely due to the influenza.

Dr. Robert Sonnenschein felt that even with very slight exudate in the middle ear as proven by a paracentesis afterward, the hearing for the whispered voice was often as good as two or three meters for the high tones.

In the differential diagnosis between an otitis media and a myringitis, aside from the other tests there are the tuning fork tests. While the Weber reaction is often unreliable, still in the case of an otitis media it is usually lateralized to the affected side, not so where a simple myringitis is present. The Rinne is usually negative with middle ear involvement, but is usually positive in myringitis.

Dr. Joseph C. Beck thought the point Dr. Ballenger brought out, which should be remembered, was not to operate on many of these cases. They had seen quite a large number of such cases that had been operated upon not so much on the mastoid as on the drum membrane, a repeated sticking of the drum. In one case the ear had been jabbed fourteen times by an otologist in this city. The patient would not submit to further paracentesis and recovered simply by leaving the ear alone.

As to the lateralization, they made the test and it did lateralize to that side where one found these blood blisters. The Weber does lateralize and he thought Dr. Sonnenschein was mistaken.

Dr. Alfred Lewy thought an important point in Dr. Ballenger's paper was that apparently the less manipulation, aside from paracentesis, in these cases, the better they got along. He also called attention to the fact that Dr. Ballenger's cases had marked mastoid tenderness, as well as persistent bleeding and later purulent discharge, so they were evidently not merely myringitis.

Dr. Lewy had recently had an interesting experience with an early mastoid operation. He was generally opposed to operating within so short a time from the onset, but this child suddenly developed a swelling, mostly in the zygomatic area, which extended over the face. The patient had had measles six weeks previously with an occasional earache since, without discharge, but had apparently been well two weeks when the swelling suddenly appeared. The drum membrane was thickened, there was no discharge and no sinking in of the canal wall. There was headache, temperature over 102° and a white cell count of 12,000. Paracentesis was done, resulting in bloody discharge which became purulent within a few hours, but after two days no relief of symptoms. X-ray showed a clouding of the mastoid area, but no definite breaking down of cell walls. With pain, tenderness, swelling and history of a possible six weeks' infection instead of a four-day affair, it was decided to do the mastoid operation. The cortex was found unaltered, but the region of the antrum and the tip cell were softened so that the curette alone was sufficient. White cell count ordered before the operation was not done until three hours afterward and was 27,000, which suggests that in doing the operation for the purpose of establishing drainage, we are at the same time opening up avenues of extension for the infection. This always happens to a greater or less degree, but Dr. Lewy believes that there is a greater probability of such spread in early operation before nature has had time to establish her defenses.

Dr. Ballenger (closing) said that in this series it was necessary to operate only two cases and they were done for the persistent otorrhea. Both mastoids were broken down. The cases that he knew about which were operated early showed a blood filled or negative mastoid. Most of these cases had mastoid tenderness to some degree, and there was great prostration. The X-ray examination was not made in any of these cases in the early stages as the patients were too sick to go to the hospital, but where the radiograph was taken later, after the formation of the pus, the shadows were dark.

In reply to Dr. Holinger's question, in regard to carbolated glycerin, he did not believe the carbolated glycerin would cause hemorrhagic nephritis before rupture or incision of the eardrum. Drs. Wall and Aldrich saw the case with the bloody urine and made the diagnosis of hemorrhagic nephritis.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

The regular monthly meeting of the Chicago Laryngological and Otolological Society was held in the John Crerar Library Building, Monday evening, March 7th, at eight o'clock.

The President, Dr. Alfred Lewy, presiding.

Fifty-five members and guests were present.

PRESENTATION OF CASES

Dr. Charles H. Long presented a case of chronic suppurative sphenoiditis.

Dr. Joseph C. Beck presented a number of cases of facial paralysis.

The first patient was a soldier who had received a bullet wound in the forehead, the bullet passing through the ear and coming out of the scleoneus region. The rotation test gave a mild response to the labyrinth. Radical mastoid operation was performed because the nerve was thought to be pressed upon and not severed. Recovery did not take place so a neuro-plastic operation was performed employing the facial, spinal accessory and disjuncture hypoglossal nerves. The united nerves were surrounded by small collars of fascia obtained in the neck-region. This operation was performed in July and the patient now has some action in the lower part of the face.

The second patient was a little girl who had an acute mastoiditis in 1920 during an attack of influenza, and had suffered a recurrence this year. The hearing was now good, there was no trouble with the labyrinth. There had developed at the end of the third week, facial paralysis due to disturbance at the tip of the mastoid process. She was operated on (simple mastoidectomy especially at the tip) at eleven o'clock one morning and at three o'clock the same afternoon there was movement in the side of the face and by evening she had full control of all facial movements, which had remained since the day of the operation. There was a profuse discharge from the ear and great tenderness preceding the operation. The preservation of function of the chorda tympani demonstrated that the pressure was at the tip of the mastoid.

The third patient had recently had two radical mas-

toid operations performed, by a general surgeon. She was first seen by Dr. Beck one week previously, when suppuration still persisted and there was present complete facial paralysis of the left side. At the time of presentation, in spite of the fact that there had been a complete facial paralysis, deafness and no reaction to the labyrinth, the patient was beginning to get some action in the lower portion of the face. The paralysis was no longer complete and Dr. Beck would not operate as long as there was a chance of further improvement.

The fourth patient was a man who had been in the Balkan military service for five years as a gunner. Both eardrums were ruptured and one labyrinth was markedly involved. An acute facial paralysis had recently come on during an acute otitis in the left, chronically discharging ear. There was no doubt a real connection with the chronic suppurative condition to which attention has been called by Moore (Bordeaux), who had seen many of these cases and mentioned the dehiscence of the Fallopian canal in which acute attacks were liable to set up acute facial paralysis.

Dr. Beck next reported a case of double facial paralysis in a girl six years old who was now under his care, but too ill to be presented. There was a history of otitis media and the subsequent development of bilateral facial diplegia. The face was completely immovable, it being impossible to close the eyes or mouth for some time, but at present there was slight movement of some of the muscles of the face. The radiographic examination revealed nothing, and the ear was healed, although there was bilateral suppuration in connection with an attack of measles a short time previously. Dr. Beck had seen three such cases, two of them being syphilitic and described as basal meningitis.

Dr. Beck still further presented a woman with redness and broadening of the nose, who had been operated ten years previously, at which time paraffin was injected in the region of the inferior turbinate for the relief of atrophic rhinitis. The patient was not seen for several years but had recently returned. Her family physician had noticed some swelling about the nose and applied the rays of a solar lamp, and immediately following the use of the light there was increase in the swelling. It was the first case Dr. Beck had seen of a paraffinoma arising from injections within the nose, but he had had three cases of paraffinoma resulting from injections outside of the nose. This patient, in contradistinction, had no pain, the peripheral nerves were not involved and it was hoped that this complication could be prevented by treatment. A placebo of a mercury plaster was being used and a histological study of the mass would be made.

Another case was demonstrated of a patient from whom a paraffinoma had been removed. The removal relieved the pain but the growth was recurring in spite of all treatment. In this case the nose had been

injected by a charlatan in this city, who is still performing the same operations. Dr. Beck thought it would be well for the Society to take some action regarding this work and keep the advertising out of the newspapers, if possible. He was convinced that paraffin should not be used in these cases.

The last case shown was that of a boy with bilateral otitis media and externa which did not respond to any treatment, local or general. Both tympanic membranes were perforated and there was present a bilateral suppuration from the middle ear. Diabetes was suspected but repeated examinations of the urine showed no sugar. Two weeks previously the patient developed a large carbuncle on his back and was referred to Dr. Sutton for a basal metabolism test and blood test, and blood sugar was found in excess.

DISCUSSION

Dr. Don C. Sutton stated that he considered the case interesting on account of the blood sugar. After the boy had fasted all night and until ten o'clock the next morning the blood sugar was .166 grams per 100 c.c. The normal was usually considered between .09 and .10 grams per 100 c.c. of blood. In a normal person the blood sugar rarely rises above .15 after ingestion of 100 grams of glucose. Along with the .166 the boy showed a basal metabolism of +16, which was probably to be accounted for in the increase of the blood sugar concentration. For years it has been recognized that furunculosis and other skin infections very frequently show increased blood sugar, and this is also found in chronic arthritis. Frequently when the focal infection and arthritis clear up the blood sugar returns to normal, but if the arthritis does not clear up the blood sugar remains high even though the focal infection is removed. In this case the speaker thought that one of the factors of the continued infection was the high blood sugar. On a full diet the patient did not show sugar in the urine, but in spite of that the blood sugar remained high all the time. In cases of hypothyroidism the blood sugar remains high and hyperpituitarism usually shows an increase also following ingestion of adrenalin. In his opinion, part of the treatment should consist of a low carbohydrate diet in an effort to reduce the blood sugar within the normal range, and the patient has shown marked improvement on such a diet.

Dr. Robert Sonnenschein briefly reported a case of facial paralysis which occurred at the Durand hospital two months ago. The patient was a boy aged eleven years who was suffering with scarlatina. He had had an acute otitis media for ten days and suddenly showed complete paralysis of all branches of the facial nerve on the left side. The speaker realized that this was an urgent indication for operation, and did a simple mastoid operation. Within twenty-four hours there was very slight improvement, which gradually increased, and within three and a half or four weeks function was restored, and the patient made a complete recovery.

SCIENTIFIC PROGRAM

Dr. Charles H. Long presented the following report of two interesting sphenoid cases:

The cases which he presented belonged to the ordinary chronic suppurative variety of sphenoids. Among the causes may be mentioned:

1. Anatomical anomalies of the sinuses.
2. Complications local and general.
3. Sinus habit.
4. Refusal of operative procedure by patient.
5. Faulty surgical technic.

Since he had had the good fortune to familiarize himself with these anomalies by the examination of more than a hundred cadavers, he could account for the failures. Every conceivable variation may be present even to the total absence of the sphenoids.

Fortunately the X-ray is of considerable service in demonstrating the size and relationship of the sphenoid cells, especially when they can be filled with a solution of barium in buttermilk, as suggested by Dr. John A. Cavanaugh of Chicago. Dr. B. C. Cushway, also of Chicago, by following the method of Bond of St. Louis, has been able to give a fairly clear picture but it is of limited assistance in diagnosing the pathology.

Local complications such as the suppuration of adjacent cells and growths of all kind in the vicinity must be reckoned with.

The general complications such as syphilis, Bright's disease, diabetes, etc., all interpose obstacles to successful treatment. Again, when bacteria of a specially virulent type find shelter here a favorable prognosis must be given with caution.

Most every rhinologist meets with certain individuals who suffer from a chronic sinusitis of one sinus or another of one form or another, and in spite of surgery, topical applications, vaccines, tonics and change of climate, the sinus changes but little as time goes on.

Whether we are dealing with an acquired or inherited condition of the tissues he was not able to state. Of course, there always remained the possibility of there being a hidden cause that had not been recognized.

In considering faulty surgical technique we are reminded that most of this is performed by the general surgeon who cleans out normal structures of the nose as readily and as expeditiously as he cleans out a post-partum uterus.

It is only thirty-nine years ago that we were told that the sphenoid sinus "was beyond the range of manual and instrumental attack" but we are now able to carve its borders with much satisfaction to ourselves and still more to our suffering patient.

Some patients refuse any operation whatsoever, but thanks to the higher educational standards of our fraternity this class of individuals is becoming more scarce.

A patient came to Dr. Long, May 22nd, 1920, complaining of noises in the ear, pounding and some deafness and a feeling of closure of the ear of ten days' duration. Dried secretions were in the mouth every morning. There were nasal obstructions especially in the right side.

X-ray picture taken May 26th did not indicate a sinusitis, or pus in the nasal pharynx; no discharge from the nose. He removed the middle turbinal, entered the posterior ethmoid cells which contained small polypi, irrigated the pus from the sphenoid sinus and enlarged the osteum to about 4 by 6 mm. A few days after the operation, the ear symptoms subsided, and have not returned since. From the middle of October to the Christmas season the patient was practically well.

Another patient came to Dr. Long in December complaining of frontal headaches. The eyes were refracted and the pain was partially relieved. November 23rd, 1920, he had the left middle turbinal, a spur from the right side of the septum and the uvula removed by a specialist at Joliet. In May, 1919, his tonsils had been operated on.

Examination of the nose showed a high deflection to the left; the posterior ethmoid cells were discharging at the site of the recent operation on the middle turbinal, and a synechia between the remnant of the middle turbinal and the septum. On January 8th the posterior ethmoid cells were removed and the sphenoid irrigated removing considerable pus; the ostea was enlarged and a small polyp removed. On March 3rd, the nasal and ethmoid walls of the sphenoid were removed.

Dr. Harry L. Pollock read a paper entitled "Pulsating Sphenoiditis."

(Abstract.)

In 1916 a patient was referred to Dr. Pollock by an oculist in Milwaukee, in whom a diagnosis of retrobulbar tumor, probably sarcoma, had been made. They did a Kroenlein operation and found no tumor but a marked cellulitis which after long continued suppuration healed out. He also had a pansinusitis on the same side (left) as his exophthalmos. An ethmoid exenteration was done and the sphenoid opened. As soon as the post-operative reaction had subsided, a thick, profuse, yellowish discharge from the sphenoid was noticed which persisted for a long time notwithstanding the usual treatment for this condition. At various times it was noted that pulsation was transmitted to the pus in the sphenoid cavity. Both internal jugulars were compressed by pressing deeply with both thumbs, and it was found that the pulsation became more marked and continued as long as the compression ensued and disappeared as promptly as the pressure was removed. After irrigating the sphenoid and allowing some fluid to remain in the cavity, pulsation could be brought about by again compressing the jugulars. Dr. Pollock was very much interested in the probable size of the sphenoids and removed the anterior wall and pars ethmoidalis down to the floor. To his surprise, the curved probe could be passed for at least two and one-quarter inches below the opening, the direction being downwards and backwards. On the right side, the probe could be passed only about one-half inch. With a long probe in the sphenoid, no pulsation could be felt but immediately upon compressing the jugulars, there was a pulsation of the probe which could be observed on the portion extending out of the nose. The Wassermann, which had been made previously to the Kroenlein operation, proved to be positive. The patient was given intensive antiluetic treatment and kept under observation and after several months treatment, the pus discharge abated and finally stopped.

Dr. Pollock has had several more cases, almost identical with the above case and found that they ran about the same course. He has also had another case

in which distinct pulsation could be observed very nicely in the sphenoid. This was in a man in whom a diagnosis of hypopituitarism or Froelich's disease had been made, in which a tumor of the hypophysis was suspected. The patient was operated transphenoidally, the floor of the sella turcica was removed and a large cyst was found which was opened and drained. The patient made an uneventful recovery and has remained well for about seven years. After all postoperative reaction had disappeared, this distinct pulsation which was the pulsation of the brain could be observed. In this case, however, there was no infection or suppuration of the sinus. At that time it was not observed whether a compression of the jugulars would increase the pulsation or not.

The points which the essayist desired to emphasize in this condition of pulsating sphenoiditis are (1) there is a necrosing osteitis which destroys a portion of the bony wall of the solid cavity or there may be the congenital dehiscences thereby permitting the pulsation to be transmitted from the carotids through the cavernous tissue to the sphenoid. (2) The underlying etiological factor is lues and often this must be carefully searched for as none of their cases gave a positive history. (3) The duration of the sphenoiditis is unusually long. Most of the cases lasted from eighteen to twenty-four months. (4) The treatment is (a) surgical, i. e., at least seeing that the opening is sufficiently large to permit drainage and (b) intensive antiluetic treatment, both by salvarsan and similar products and by mercury and potassium iodid.

Dr. Frank Brawley presented the following report of a "Case of Subdural Abscess, Secondary to Sphenoid Infection."

This patient gave a history of meningitis in early life. For more than ten years she suffered attacks, epileptoid in character, and was very much depressed mentally, considering epilepsy to be a disgrace.

She was sent to Dr. Brawley by Dr. John R. Newcomb of Indianapolis, December 15, 1917. At that time she was suffering from severe headaches, temporal and occipital in character. Slight relief only was obtained from opiates. These headaches had followed an intranasal operation on the left side. The left eye showed great injection of the vessels of the bulbar conjunctiva and puffy red lids. The left vision was 6/12—. The visual fields showed large paracentral scotomata in both eyes.

The nose showed partially exenterated anterior ethmoidal cells and a partial removal of the middle turbinal on the left side. Suction showed slight secretion in the recessus opheo-ethmoidalis. There was rough bone in this area. The left antrum after opening and irrigation was negative. The left anterior sphenoidal wall measured 6 cm. from the pyriform margin and this was confirmed by radiographs. The ethmoidal and sphenoidal walls were eburnated.

As suction at once relieved the severe headache, drainage of the posterior ethmoidal cells and sphenoid was decided upon. Operation on the left sphenoid and ethmoid was performed on December 21, 1917. There was moderate hypertrophy of the

mucosa in the ethmoid cells and the laminae and cell walls were eburnated. The sphenoid was very shallow and when a portion of the anterior wall had been removed an opening with rough bone edges was seen in the posterior wall in the superior external region through which the dura protruded and around the dura as it pulsated in the opening a thin pus exuded. The distance to the floor of the subdural space was measured through this perforation and a long slot cut with the bur through the posterior sphenoidal wall near the floor for drainage. To enlarge the original opening would have made an opening impossible to close afterward. For about ten days thick greenish pus and blood drained from the lower opening. A probe was passed 10 cm. from the pyriform margin or $3\frac{1}{2}$ cm. beyond the posterior sphenoidal wall. Progress was eventful. The vision improved from 6/12— to 6/5+. The enlarged blind spot contracted to normal and the entire left field of vision became normal. The perforation and operative openings were closed by trichloroacetic acid stimulation of granulations. The paracentral scotomata first observed proved to be excessive enlargement of the blind spot.

The patient returned to her home but on March 8, 1918, came for examination because of epistaxis and pain about the right eye and ear following rhinitis. The left operative field was negative. The right sphenoid contained mucopurulent secretion which was removed with compressed air several times and symptoms subsided.

July 9, 1919, following an attack of influenza, the eyes were much inflamed with injected conjunctival vessels over the globe. There was vertical pain extending to the right ear. The cultures from the conjunctival sac were negative. The right posterior ethmoid showed hypertrophies and suction brought a thick bloody mucous followed by relief of pain. Vision had dropped to 6/12— in the right eye. Some vertigo and right-sided tinnitus were present. The ethmoid and sphenoid of the right side were opened and drained and the headache and nasal drainage relieved. The visual field of the right eye was very irregularly contracted with paracentral scotomata. Vestibular tests were begun showing lowering of all labyrinth reactions. These were not completed as the patient was given a complete rest following operation. Following the operation on the right side, the patient remained in an epileptoid state for over two hours but was entirely normal mentally thereafter.

He saw her one month ago and she stated that she had gained forty pounds and had never known such good health. With each attack she experienced headache, markedly injected eyes and lids, short attacks of vertigo and tinnitus, lowered vision, marked enlargement of the blind spot, atypical epileptoid seizures. All these conditions immediately subsided with sinus drainage.

In searching the literature he has been unable to find a parallel case; all similar cases ended fatally.

DISCUSSION

Dr. Bertram C. Cushway stated that in an effort to work out a method whereby the sphenoidal sinuses could be shown to better advantage, there were many difficulties to be overcome. They have tried Dr. Law's position for showing the sphenoid but it did not seem very successful. Dr. Bond of St. Louis had recommended throwing the head back or propping the patient back so that the rays shot from below through the chin, and the speaker believed this was a better method. The idea of injecting the sinuses with barium is to bring out their exact position in order to be able to figure out the proper angle so that they could always be definitely shown on an X-ray plate of film in such a manner that they would not be confused with surrounding structures.

So far very little that is satisfactory has been done for in most instances the barium injection ran out of the sphenoids before a picture could be obtained.

It is difficult to determine the proper angle for this work as individuals have different contours; also the sphenoids vary in size and shape and in some instances are absent. He has purchased a little instrument to use in figuring out the proper angles and is making a series of plates, hoping to be able to get a good average angle to use on all cases. At a later date he hopes to be able to give some interesting definite information for taking sphenoid sinuses.

Dr. John Cavanaugh said he had reported the use of barium suspended in buttermilk but had noticed that many of the cases after injection complained of headache. Dr. Hubeny suggested the use of malted milk and Dr. Cavanaugh found that by substituting malted milk his patients had no more headache, so has used barium suspended in malted milk entirely. After injecting the solution Dr. Cavanaugh always places a little piece of cotton at the opening and has had no trouble with the solution running out before the picture was taken. After taking the picture it is a simple matter to remove the cotton.

Dr. Charles H. Long said he had been disappointed in regard to the cure of the case and was glad to hear someone say that it would be two years before healing could be expected. In two of the cases he dried out the sphenoid with hot air introduced by means of a little eustachian catheter attached to an electric apparatus, and then applied carbolic acid, following this by alcohol. This produced considerable reaction accompanied by severe headache.

Dr. Charles M. Robertson stated that he had seen pulsating sinuses occasionally, although they were not common. He had seen one case with pulsation from the internal carotid artery, and had heard of a case that occurred in the sphenoid sinus in which the pulsation caused the patient's death, the artery having been injured. Curettage caused a break in the carotid artery wall and the patient succumbed in a few moments. He warned that one must be very careful in attempting curettage because statistics show that in 10 per cent. of the cases the carotid artery occupies a place in the sphenoid sinus itself and where a dehiscence exists it is usually on the outer wall of the sinus. Ordinarily the carotid artery is pretty tough so it can be rubbed with the curet within bounds of safety, unless it is attacked from a lateral direction. Cavernous sinus hemorrhage would not be as dangerous as the other. Dr. Robertson had seen the cavernous sinus torn in the Gasserian operation; the bleeding was very profuse but after a little tamponage it was easily controlled, requiring no pack.

As to the extradural abscess, Dr. Robertson had seen about four cases arising from sphenoid abscess.

He had had one case in which the lateral X-ray radiograph showed what appeared to be four sphenoidal sinuses, each below and posterior to each other. He believed in that case it was a syphilitic osteitis and the sinus or sinuses were small spaces hollowed out of the syphilitic osteitis. These cases improved on immense doses of antisyphilitic treatment followed with mercury over a long period of time.

Dr. Joseph C. Beck stated that when he first tried the plan of compressing the jugulars it was purely by accident

because in that particular case he was thinking of the eye condition and the possibility of a cavernous sinus thrombosis. In the case of the man with the exophthalmos reported by Dr. Pollock, although the fundus did not show the condition he thought perhaps there was something behind the eye balls so he compressed the jugulars and then saw the pouring out of the pus from the sphenoid. Subsequently in cases where there was a similar condition this had proved to be a valuable symptom. He had always kept away with any surgical intervention from the posterior wall of the sphenoid when it was found to be soft or eroded. In view of the fact that there was so much danger of setting up a hemorrhage, which could prove fatal, he believed one should leave the posterior wall alone unless one was certain that there was an abscess in that region. He believed most of these cases were syphilitic.

Dr. John Cavanaugh said he was not prepared to report this case, but would give a brief outline. The patient, a man, was thrown from an automobile. His skull was fractured and he bled from both ears and the nose. Hemorrhages occurred at various intervals and three weeks ago he lost two pints of blood. The hemorrhage came like a cloudburst, all at once, then stopped, and it made little difference whether the nose was packed or not; the bleeding would last for about three minutes.

Dr. Cavanaugh first saw the patient two weeks ago. He was very anemic and a transfusion was done. On examination with the pharyngoscope pulsation could be seen, evidently in the sphenoid area on the right side. On the left side there was nothing abnormal; the septum was pushed over, due to the pack on the right side.

The source of bleeding was still a question. A post-nasal pack moistened in Monsel's solution was used, and changed every few days. The patient had improved somewhat since the packing was used and the headache had not been so severe. The coagulation time was five minutes. Partial optic atrophy of the right eye was present. The wife stated that about two months after the accident, after the patient had left the hospital, she noticed that there was a distinct bruit which she heard four inches from his head. She did not know how long the sound had been present. The Wassermann reaction was negative.

Dr. J. Holinger gave the history of a lady who had been treated for four months by a Christian Scientist for headache and loss of vision in one eye. X-ray and examination showed pus in the posterior ethmoid and sphenoid sinuses as the cause of her troubles. After removal of the middle turbinal and clearing of the sinuses the patient made a speedy recovery. The sight of the eye was restored.

Dr. Harry Pollock (closing his part of discussion) agreed with Dr. Beck that it is always dangerous to do any curetting on the posterior lateral wall for fear of injuring the carotid or cavernous. Dr. Pollock had never seen a case of cavernous bleeding by curetting the sphenoid. He had reported a case of suspected intracranial tumor before the Chicago Neurological Society. While investigating the sella there was a sudden rush of blood which almost exsanguinated the patient. They packed in gauze, with stitches through the dura and scalp in order to get the patient back to her room before death occurred, but about twenty minutes afterward she said she felt fine and she made an uneventful recovery. The gauze was removed gradually and the patient lived for at least a year, and gave birth to a child during the year following operation.

In the second case Dr. Long had showed Dr. Pollock detected a slight pulsation. The patient said it hurt her nose a little to dilate the nostril; so he did not attempt to make a thorough examination. He believed if the jugulars were always compressed more cases would be found than were usually suspected.

In taking spinal fluid and blood Wassermann tests a luetic infection is discovered in almost all of these cases, and in those cases Dr. Pollock thought there was always a necrosis, an osteitis of the floor of the lateral wall of the sphenoid which went down to the body, probably to the basilar process. All these cases required a long time for recovery and all

of them had received treatment with mercury and potassium iodid for at least a year. All but two cases finally cleared up.

Dr. Alfred Lewy said he had also noticed the pulsation in the case of Dr. Long's and asked if Dr. Long had any explanation to make of the condition—to what did he attribute this pulsation of the mucous membrane.

Dr. Charles H. Long said he had not noticed the pulsation until his attention was called to it, and had no explanation to offer.

Dr. Frank Brawley (closing the discussion on his paper) stated that in his case repeated Wassermann tests were negative, there was no evidence of syphilis at any time, although the patient was examined most exhaustively, and there was no history of syphilis in the case. More than three years had passed since the drainage of the extradural abscess.

About two weeks previously he had seen a case with similar characteristics, which he reported briefly.

KANE COUNTY

On Wednesday evening, November 16, the annual meeting of the Kane County Medical Society was held at the Elgin State Hospital. Through the courtesy of Dr. Ralph T. Hinton it was made possible to hold it there and it was one of the most successful meetings ever held by the society.

The business meeting was called at 8:30 o'clock in the evening at which time new officers were elected for the coming year.

Dr. John R. Tobin of Elgin was elected as president. Dr. A. H. McLaughlin of Aurora was elected vice-president. Dr. E. L. Lee of Aurora held over as secretary and treasurer for the next year. Dr. R. T. Hinton was elected as delegate to the state meeting and Dr. D. J. Evans of Aurora as alternate.

Following the business meeting the members and their wives and sweethearts were escorted to the banquet hall where followed such a "feed" as will always be remembered so long as the society remains. Preceding the serving of the "feed" the entire assembly engaged in community singing which was much enjoyed. Following the repast the guests were entertained by the Imperial quartet of Elgin which pleased the crowd with their appropriate selections.

Following this entertainment Dr. Tobin made a very witty and entertaining speech of acceptance of the office of president and made a solemn promise to attend every meeting.

The scientific part of the program was given by Dr. Frank Norbury of Springfield who spoke upon the subject, "Non-suppurative Infections of the Nervous System." His talk was very instructive and much appreciated by the gathering. Following his talk a vote of thanks was extended to Dr. Hinton for his generous hospitality and also one to Dr. Norbury for his excellent paper.

The quartet closed the meeting by singing Dudley Buck's "Good Night."

All present were unanimous in voicing the sentiment that the meeting was the best ever held by the society.

RANDOLPH COUNTY

Society met November 3, 1921, in parlor of Broadway Hotel at Sparta. Eight members present. Re-

ports of voluntary committee to see Drs. Thos. Robertson and A. Wiebusch, reported that by making Fee Bill item relating to minimum price of calls, flexible, because of local conditions, and local physicians mutually agreeing to same, that these members would sign the Fee Bill. There being only two in county who had not already signed, the secretary was directed to have 100 copies printed when they signed. This flexibility of Fee Bill fees for calls was made on motion by Le-Saulnier and seconded by Fritze. The price printed in Fee Bill is not to be changed from \$2.00 for call, but flexibility makes, by mutual understanding in some localities, \$1.50 to \$2.00 as minimum.

Secretary was directed to write Dr. C. G. Smith referring him to printed Randolph County Minutes of Chester meeting, printed in September, 1921, ILLINOIS MEDICAL JOURNAL. It was unanimously understood by members that signing or not signing Fee Bill had nothing to do with retaining membership in County Medical Society.

Dr. N. G. Stevenson being not present to answer to charges of unprofessional conduct preferred by Society, action was delayed until next meeting. On motion secretary was directed to at once write Congressman Dennison to do all in his power to defeat the Maternity Bill which has already passed Senate. Resolution as follows:

Resolved, by the Randolph County Medical Society, representing 90 per cent of medical profession of the county, that we unanimously consider the Sheppard-Towner Maternity Bill now before the House as inimical to the public interests and subversive to popular government and,

Resolved, that we request our Representative in Congress to use all honorable means for its defeat.

A very interesting and instructive paper, "The Human Heart by Decades," was read by Dr. Fritze and discussed by members.

Adjourned to meet at call of President and Secretary.

J. W. ROBERTSON, President,
LOUIS J. SMITH, Secretary.

STARK COUNTY

At the May meeting of the Stark County Medical Society the following officers were elected for the ensuing year: President, Dr. W. C. Mitchell; vice-president, Dr. J. H. McIntosh; secretary and treasurer, Dr. Dean C. Brown; board of censors, Drs. W. S. Garrison, E. R. McBrown and C. C. McMackin; delegate to State Society, 1921, Dr. W. C. Mitchell; alternate, Dr. Dean C. Brown; delegate to State Society, 1922, Dr. E. B. Parker; alternate, Dr. Dean C. Brown.

The Fall meeting was held November 1st at Toulon, Ill.

Dr. George Parker of Peoria read an excellent paper on "Recent Advance in the Diagnosis of Nephritis."

Dr. William D. Chapman of Silvis spoke at some length on the subject of "State Medicine."

This was the best meeting we have had in some years.

DEAN C. BROWN, Secretary.

Marriages

Sidney Wiggins to Miss Pansy Jones, both of Rock Island, Ill., October 14.

John P. Coughlin to Miss Edwina Marie Suess, both of Chicago, October 20.

John Wolfgang Geiger, La Salle, Ill., to Miss Gertrude M. Cahill of Peru, Ill., October 15.

D. Powell Johnson, Chicago, to Miss Ione Elizabeth Kneese of Muscatine, Iowa, October 25.

Philip W. Whitely, Chicago, to Miss Florence Alice Kirchoff of Hampshire, Ill., October 11.

Hessell Stuart Yntema, Chicago, to Miss Jean Bazan of Holland, Mich., at Chicago, September 17.

Personals

The director of health has appointed Dr. Robert C. Bradley, Peoria, as district health officer in the division of communicable diseases.

Dr. Don B. Stewart, Chicago, has been appointed superintendent of the Ziegler Hospital, Ziegler, to succeed Dr. Leo V. Gates, who resigned, effective November 1, to accept the position of surgeon at the new Browning Hospital, DuQuoin.

Dr. L. W. Bremerman of Chicago was elected president of the Ohio Valley Medical Association at its twenty-second annual convention, at Evansville, Indiana, November 16. Drs. E. W. Ryerson, J. R. Pennington, J. M. Neff and M. M. Portis of Chicago addressed the association.

Dr. E. E. Irons of Chicago was the guest of the Logan County Medical Society, November 17, holding a clinic in the afternoon at St. Clara's Hospital, Lincoln, and reading a paper on "Portals of Entry of Chronic Infection," following the dinner at the Commercial Hotel in the evening.

Dr. George A. Zeller succeeded Dr. Ralph A. Goodner resigned, as superintendant of Peoria State Hospital, at South Bartonville, November 17. Dr. Zeller was the first superintendent of the institution when it was opened twenty years ago and more recently has been superintendent of Alton State Hospital.

Dr. Abraham Zingher of New York was the guest of honor at a dinner at the Hamilton Club, November 23, preceding his address on "Immunization against Diphtheria by Toxin-antitoxin" before the Chicago Medical Society. The address was given in Fullerton Hall at the Art Institute to an audience that taxed the capacity of the hall. His work with toxin-antitoxin in the New York schools began eight years ago and the children immunized at that time are still immune as shown by the Schick test. More than 125,000 children were immunized last year in New York City.

News Notes

—The state department of health addressed a letter upon the subject of birth registration to the state and local medical societies and to all physicians, as nearly as possible, who are licensed to practice medicine in Illinois.

—An epidemic of severe smallpox has prevailed in Kansas City since September causing 297 cases and ninety-six deaths previous to November 30. State inspectors are examining all passengers entering Illinois from the infected area.

—Pamphlets attacking Toxin-Antitoxin have been distributed in Elgin, presumably by the Medical Liberty League, to compel City Physician Mann to terminate a diphtheria quarantine. But the League tried to bluff the wrong man.

—Jasper County Medical Society met in Newton, November 8, with 13 members in attendance. Papers were read by Dr. C. E. Price on "Fever" and by Dr. Florent E. Franke on "Methods of Making a Mental Examination."

—The state hospital at Elgin is building a new operative department, which it expects to have completed by January 1, 1922. The new additions will include eighty ward beds besides nine beds intended for employees. The hospital for soldiers to be opened later will have a capacity of 206 beds.

—A meeting of the Institute of Medicine of Chicago was held, November 22, at the City Club, Chicago. Dr. Robert McCarrison, M. B., D. S. C., lieutenant-colonel, Indian Medical Service, gave an illustrated lecture on "Faulty

Food in Relation to the Gastro-Intestinal Disorders."

—The City Medical Association of Kankakee has made a proposition to the city council to take over the duties of city physician allowing each patient to select the physician of his choice, the work to be done gratis by the individual physician, but the council to pay the association \$150 per year.

—A modern ten-story office building to cost \$700,000 is to be erected at Milwaukee and North Avenues and Robey Street to be called "Medical Arts Building." It is planned especially for offices for physicians, surgeons and dentists. It will house a drug store and restaurant and luxurious club rooms of the Northwest Commercial Club.

—The McLean County Medical Society held its regular bi-monthly meeting in Bloomington, November 8. Dr. E. P. Sloan gave an address on his "Impressions of European Clinics" gained during his trip of last summer. Dr. Harlan Hart read a paper on "Transfusion of Blood." Dr. Ralph Peairs of Normal read a paper on "The Control of Diphtheria."

—At a recent meeting of the Elgin Physicians' Club they celebrated the birthday of Dr. Albert W. Hinman, Dundee. Dr. Hinman, who was 76 years old, October 10, is one of the oldest physicians in active practice in this part of the state, having been engaged in the practice of medicine for more than forty years, and most of the time in Dundee.

—Rockford Hospital has been reorganized in conformity with standards of the American Medical Association, the American College of Surgeons, and the American Hospital Association. Recent improvements include the laboratory, which is in full charge of a physician as pathologist; also a children's clinic and an outpatient department.

—A school of instruction for health officers is to be held in Springfield December 12-14. The school will be conducted primarily for the benefit of newly appointed district health superintendents who will work under the direction of the state department of public health; but the courses will also be open to local health officers who desire to attend.

—The Southern Illinois Medical Association held a convention in Belleville, November 3 and 4. The following officers were elected: President, Dr. Heber Roberts, Belleville; first vice-president, Dr. H. C. Moss, Carbondale; second vice-president, Dr. James R. Tweedy, Cobden; secretary-treasurer, Dr. A. B. Capel, Shawneetown; assistant secretary, Dr. A. C. Johnson, Cairo.

—The *Journal of Orthopædic Surgery*, the official organ of the American Orthopedic Association and of the British Orthopædic Association, announces that in January it will change from a monthly to a quarterly publication. In issuing the Journal every three months it is planned to provide the readers with fully as much, or even more, reading matter than under the present arrangement, and it is hoped that the Journal may be made more valuable and interesting. The Journal will continue to be published in Boston under the existing management.

Deaths

WILLIAM A. BARCLAY, Chicago; Chicago Physio-medical Institute, 1897; formerly a newspaper man; died, October 24, from heart disease, aged 64.

GEORGE W. BRADLEY, Waverly, Ill.; Louisville (Ky.) Medical College, 1871; practitioner for fifty years in Waverly; died, November 1, aged 83.

CHARLES N. DUNN, Centralia, Ill.; Hahnemann Medical College and Hospital of Chicago, 1878; died recently from carcinoma of the rectum, aged 70.

EUGENE SAWYER, Chicago; Hahnemann Medical College and Hospital of Chicago, 1882; died, October 20, after a long illness, aged 85.

EDWARD GERALD SEPPELE, Chicago; Dearborn Medical College, Chicago, 1904; University of Illinois, Chicago, 1906; died, October 19, aged 47.

ISA A. EBERHART, Chicago; Bennett Medical College, Chicago, 1889; also a lawyer; died, October 29, at Riverside, Mich., from senility, aged 87.

JOHN ANTHONY COLBURN, Braidwood, Ill.; Northwestern University Medical School, Chicago, 1894; died, October 16, at Los Angeles, aged 59.

EDWARD H. RINKEL, East St. Louis, Ill.; Missouri Medical College, St. Louis, 1882; died in October, at the home of his brother, Medford, Okla., aged 64.

WILLIAM P. RYAN, Decatur, Ill.; Bennett Medical college, Chicago, 1897; died, October 27, from edema of the larynx, aged 51.

DAVID P. WEAVER, Avon, Ill.; Eclectic Medical Institute, Cincinnati, 1886; died, October 30, at the Galesburg Cottage Hospital, Galesburg, Ill., from pneumonia, following an operation, aged 72.

JOHN FITCH DOVE, Chicago; Meharry Medical College, Nashville, Tenn., 1918; member of the Chicago Dental and Pharmaceutical Society; died, November 6, from tuberculosis, aged 28.

CHARLES VINCENT EADS, Arthur, Ill.; Barnes Medical College, St. Louis, 1899; was drowned, November 14, when his car overturned into a ditch near Decatur, Ill., aged 50.

SOLOMON S. GOLDEN, Chicago; Chicago College of Medicine and Surgery, 1913; served in France during the late war as lieutenant, M. C., U. S. Army; died, November 3, aged 48.

ROBERT F. HAYES, Freeport, Ill.; University of Pennsylvania, Philadelphia, 1858; practitioner for more than half a century; died, November 6, from senility, aged 89.

WILLIAM A. WISEMAN, Camargo, Ill.; Jefferson Medical College, Philadelphia, 1886; a Fellow A. M. A.; president of the Douglas County Medical Association; died October 15, aged 68.

RAYMOND LAURENCE WALL, Yorkville, Ill.; University of Illinois, Chicago, 1913; member of the Illinois State Medical Society; died, October 12, from acute endocarditis, aged 33.

MARY LUCINDA VINCENT, Chicago; University of Michigan, Ann Arbor, 1875; practitioner in Chicago for forty-two years; former physician at the Sarah Hackett Stevenson Home, where she died, November 2, from heart disease, aged 82.

CHARLES LEWIS MOIR, Chicago; Kentucky School of Medicine, 1903; assistant superintendent, Louisville (Ky.) City Hospital; served in the World War; died, November 9, at El Paso, Texas, from tuberculosis, aged 39.

WILLIAM L. GARRISON, Toulon, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1890; a Fellow A. M. A.; Rush Medical College, Chicago, 1893; died, November 3, at the Francis Hospital, Kewanee, Ill., from injuries received when he fell from his office window in Toulon, aged 53.

JOHN FRANCIS CROWLEY, La Salle, Ill.; College of Physicians and Surgeons (University of Illinois), Chicago, 1900; a Fellow A. M. A.; formerly surgeon for the Rock Island and Illinois Central Railroad; died, October 22, from acute endocarditis, in Chicago, aged 55.

CHARLES J. BOSWELL, Mounds, Ill.; Marion-Sims College of Medicine, St. Louis, 1895; a Fellow A. M. A.; surgeon of the Illinois Central Railroad for twenty years; member of the Illinois state board of health; mayor of Mounds for two terms; president of the state bank; died, October 22, from a duodenal ulcer, aged 45.

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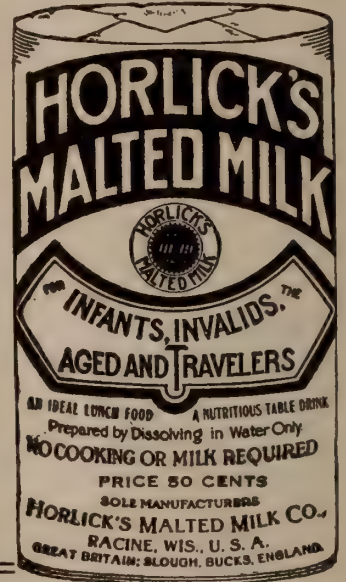
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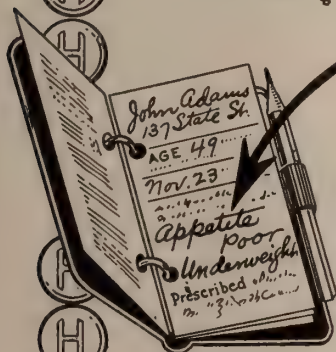
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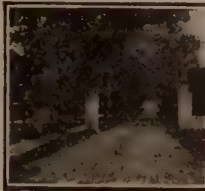
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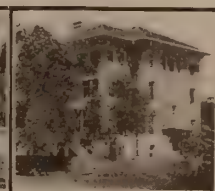
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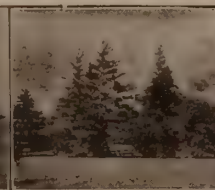
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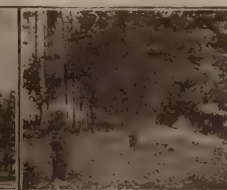
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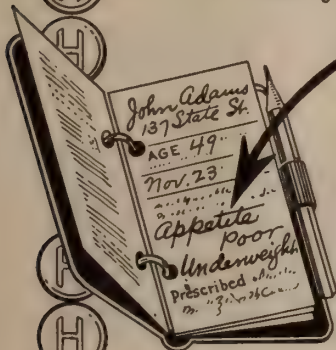
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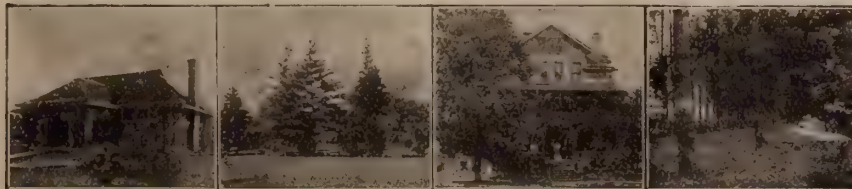
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